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**Arutunian** (43) **Pub. Date: Sep. 7, 2006**

(54) **SYSTEM AND METHOD UTILIZING ENHANCED IMAGERY AND ASSOCIATED OVERLAYS**

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**PATENT-SEA**
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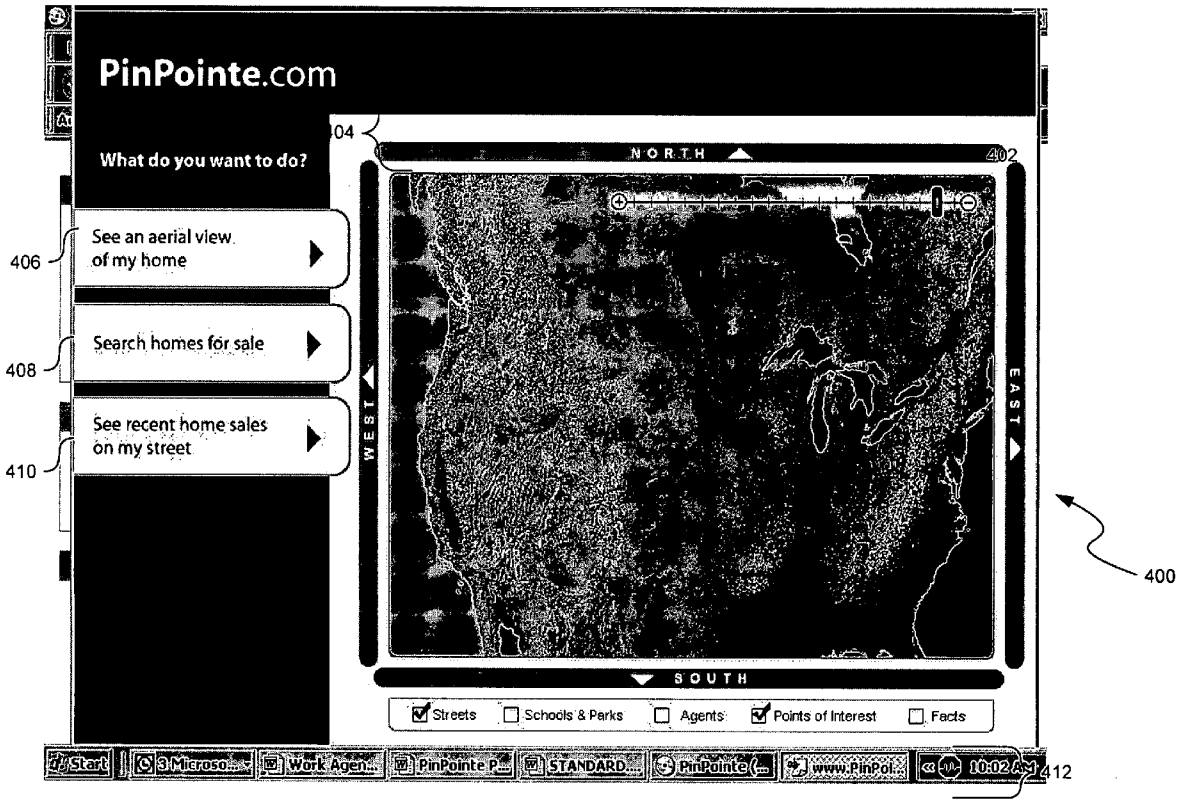
**Publication Classification**

(51) **Int. Cl.**
*G09G 5/00* (2006.01)

(52) **U.S. Cl.** ..... **345/629**

(57) **ABSTRACT**

Providing location-specific information may be based on receiving a request for map image data associated with any combination of satellite images, aerial photographs, and rasterized maps and receiving a request for applying a displayable map overlay to the requested map image data. The displayable map overlay data may include one or more types of data configured for dynamic display in association with the imap. A display description associated with the requested map image data may be provided as a collection of map tiles, wherein the collection of map tiles is configurable to provide a map with capabilities that allow a user to continuously zoom in on and out of selected areas of the aerial map. Information associated with displaying the requested map overlay in association with the requested map image data may also be provided.



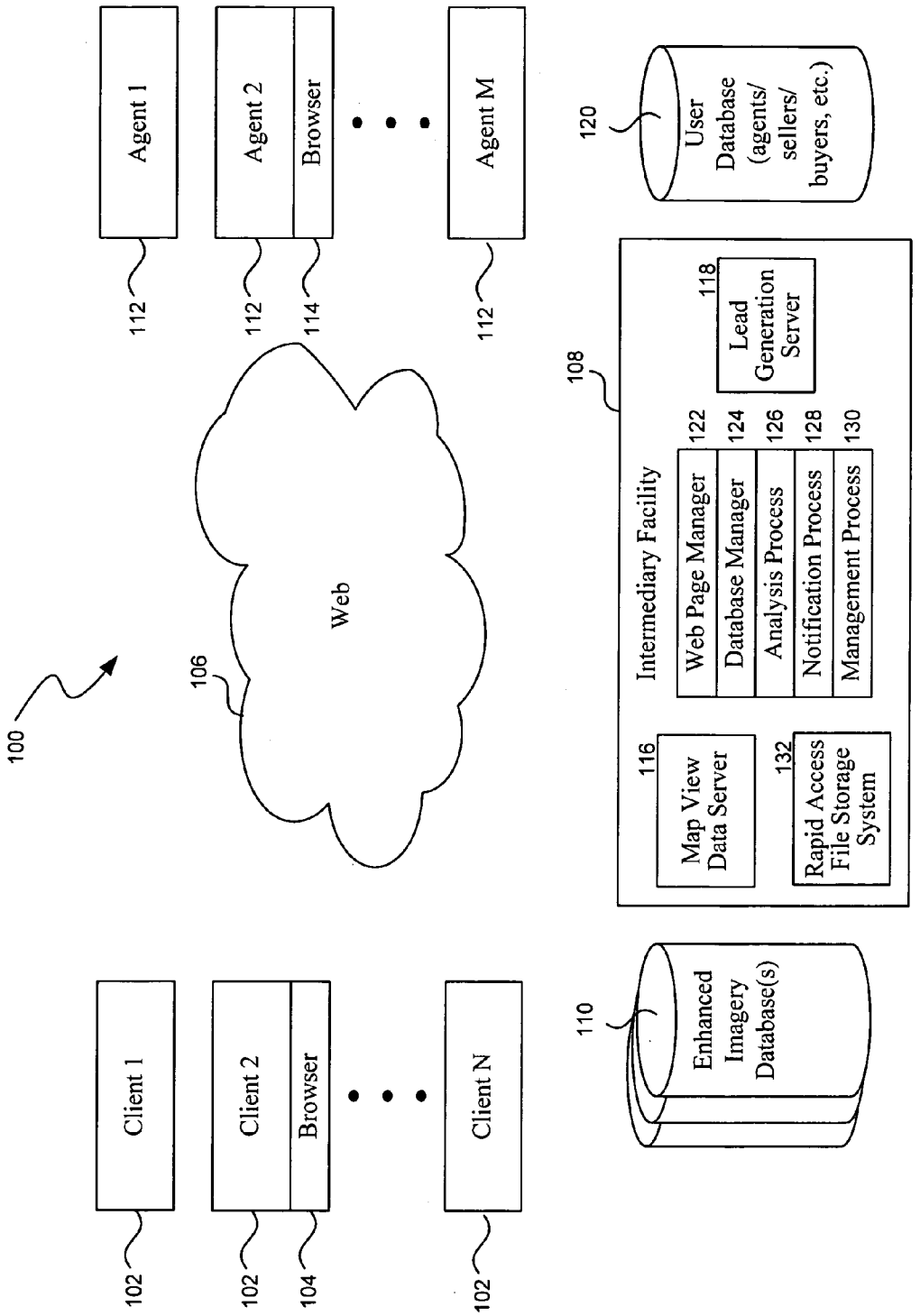

100
Client 1
Client 2
Browser
Client N
102
102
104
102
Agent 1
Agent 2
Browser
Agent M
112
112
114
112
106
Web
108
Intermediary Facility
Web Page Manager
Database Manager
Analysis Process
Notification Process
Management Process
122
124
126
128
130
Lead Generation Server
118
Map View Data Server
116
Rapid Access File Storage System
132
110
Enhanced Imagery Database(s)
120
User Database (agents/ sellers/ buyers, etc.)

*FIG. 1*

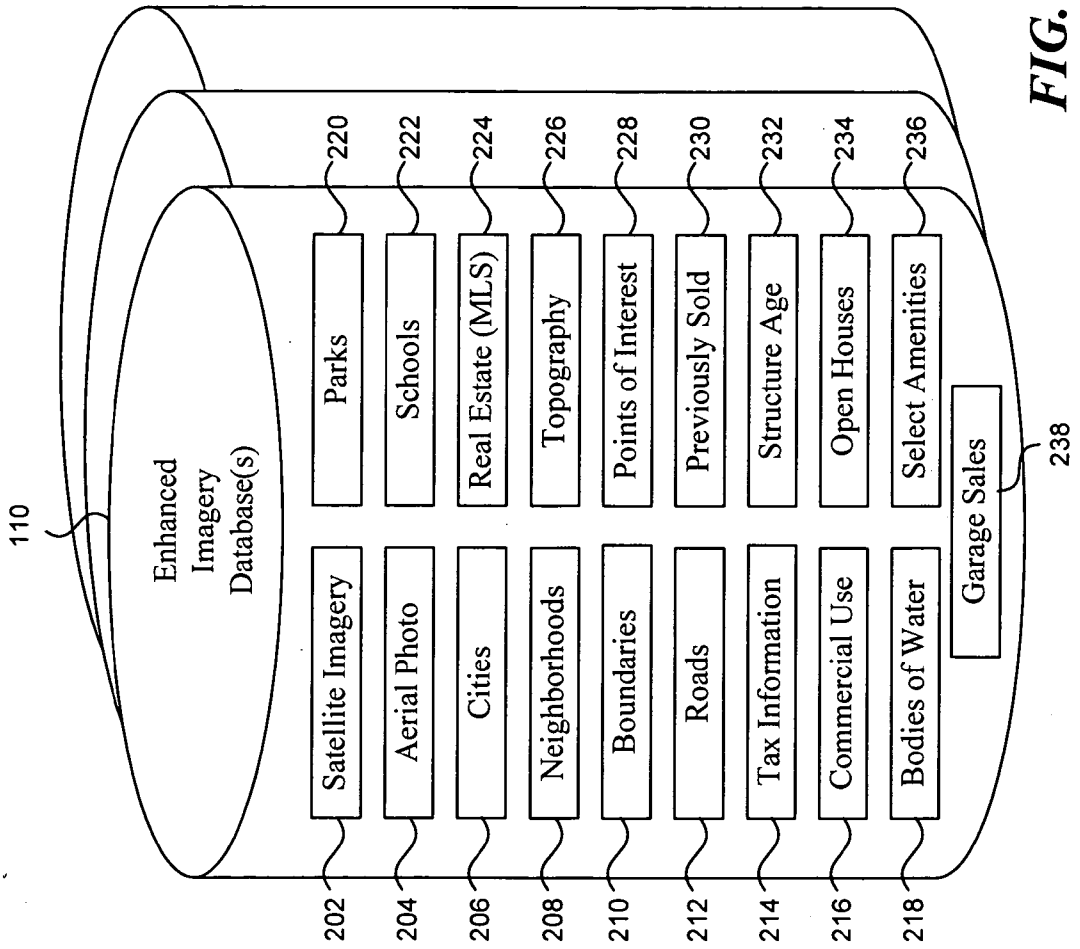

110
Enhanced Imagery Database(s)
Satellite Imagery
Aerial Photo
Cities
Neighborhoods
Boundaries
Roads
Tax Information
Commercial Use
Bodies of Water
Parks
Schools
Real Estate (MLS)
Topography
Points of Interest
Previously Sold
Structure Age
Open Houses
Select Amenities
Garage Sales
238
202
204
206
208
210
212
214
216
218
220
222
224
226
228
230
232
234
236

FIG. 2

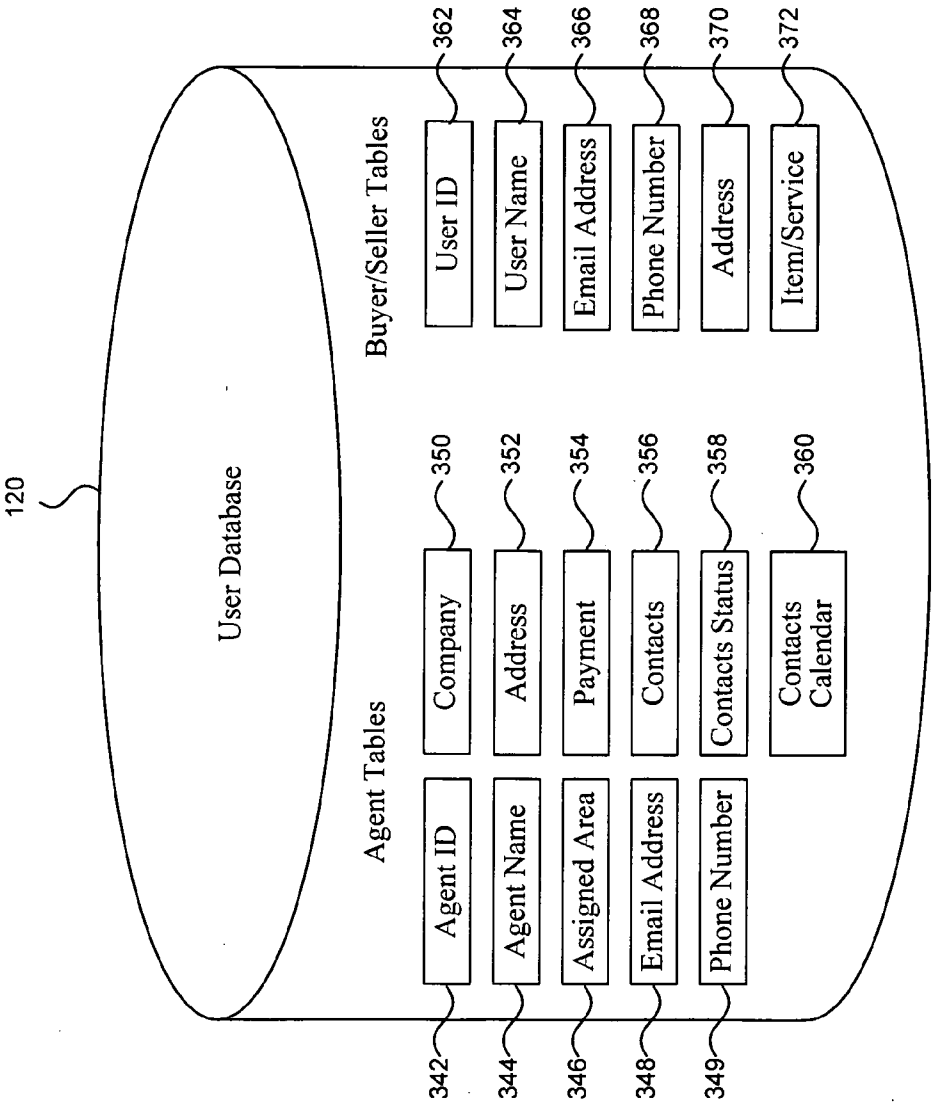

120
User Database
Agent Tables
Agent ID
Agent Name
Assigned Area
Email Address
Phone Number
Company
Address
Payment
Contacts
Contacts Status
Contacts Calendar
Buyer/Seller Tables
User ID
User Name
Email Address
Phone Number
Address
Item/Service
342
344
346
348
349
350
352
354
356
358
360
362
364
366
368
370
372

*FIG. 3*

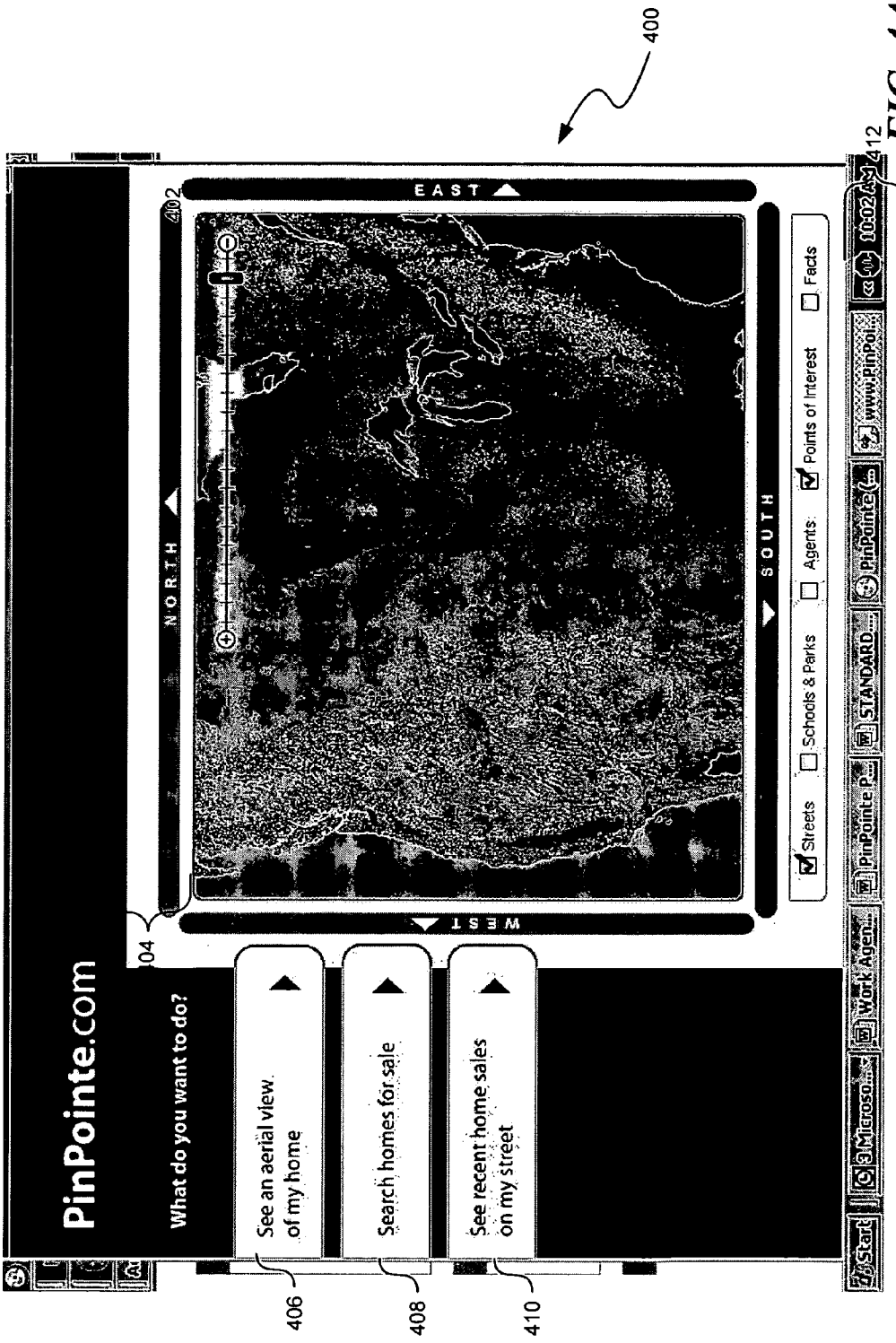

400
PinPointe.com
What do you want to do?
See an aerial view of my home
Search homes for sale
See recent home sales on my street
406
408
410
402
404
412
EAST
NORTH
SOUTH
WEST
Streets
Schools & Parks
Agents
Points of Interest
Facts
Start
Microso...
Work Agen...
PinPointe P...
STANDARD...
PinPointe(...
www.PinPoi...
10:02 AM

FIG. 4A

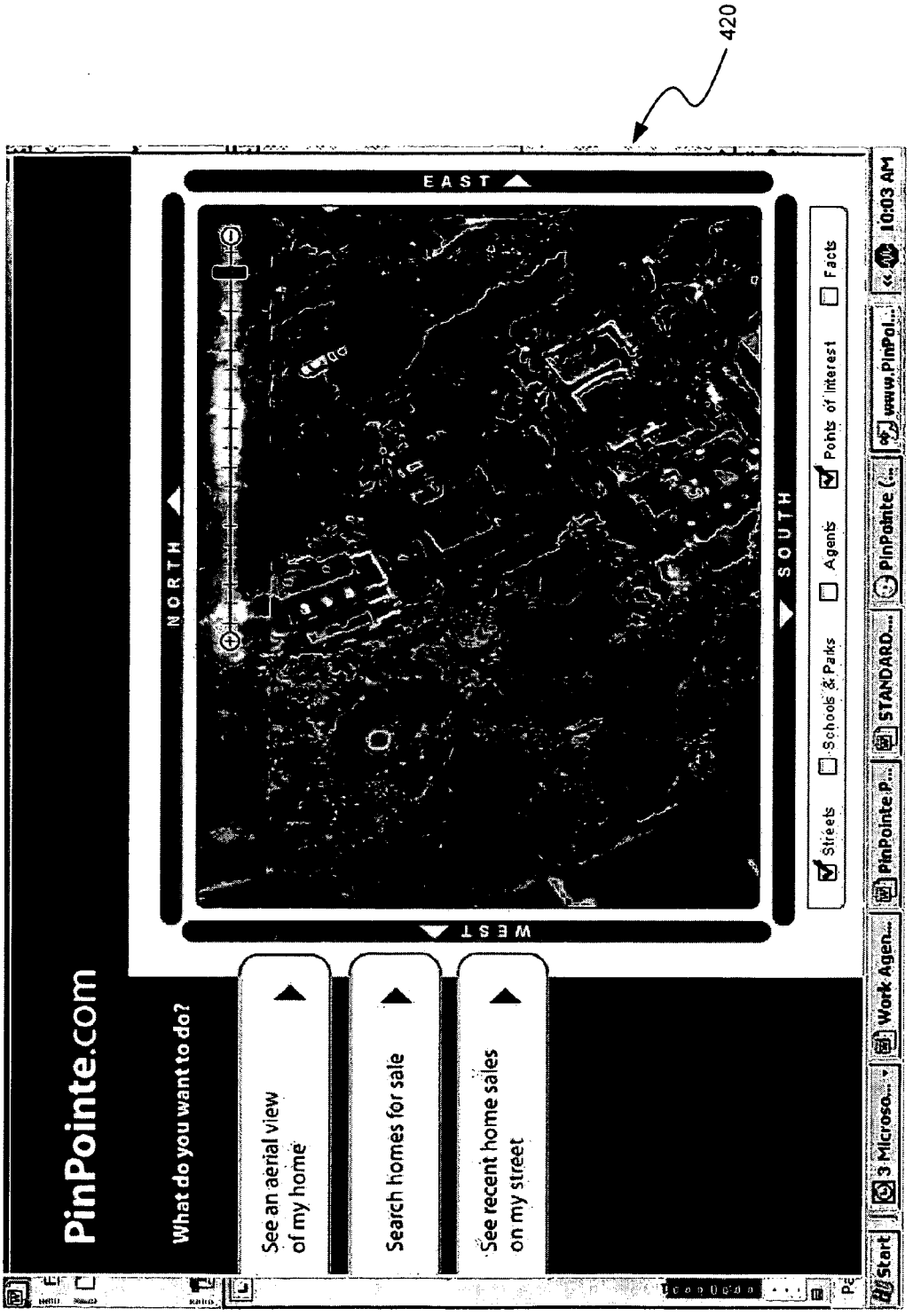

420
PinPointe.com
What do you want to do?
See an aerial view of my home
Search homes for sale
See recent home sales on my street
EAST
NORTH
SOUTH
WEST
Streets
Schools & Parks
Agents
Points of Interest
Facts
Start
10:03 AM

FIG. 4B

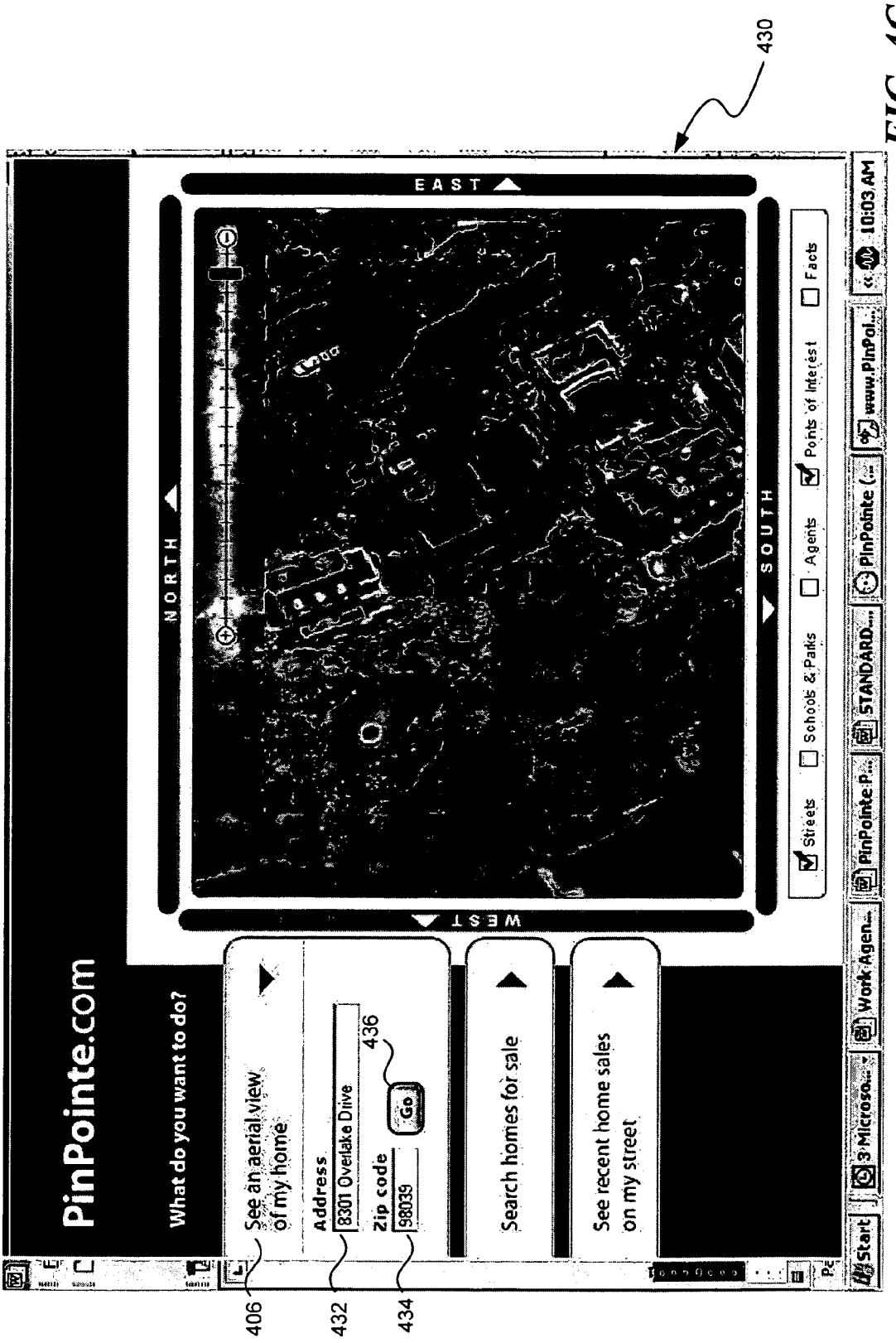

430
PinPointe.com
What do you want to do?
See an aerial view of my home
Address
8301 Overlake Drive
Zip code
98039
Go
436
Search homes for sale
See recent home sales on my street
406
432
434
EAST
NORTH
SOUTH
WEST
Streets
Schools & Parks
Agents
Points of Interest
Facts
Start
10:03 AM

FIG. 4C

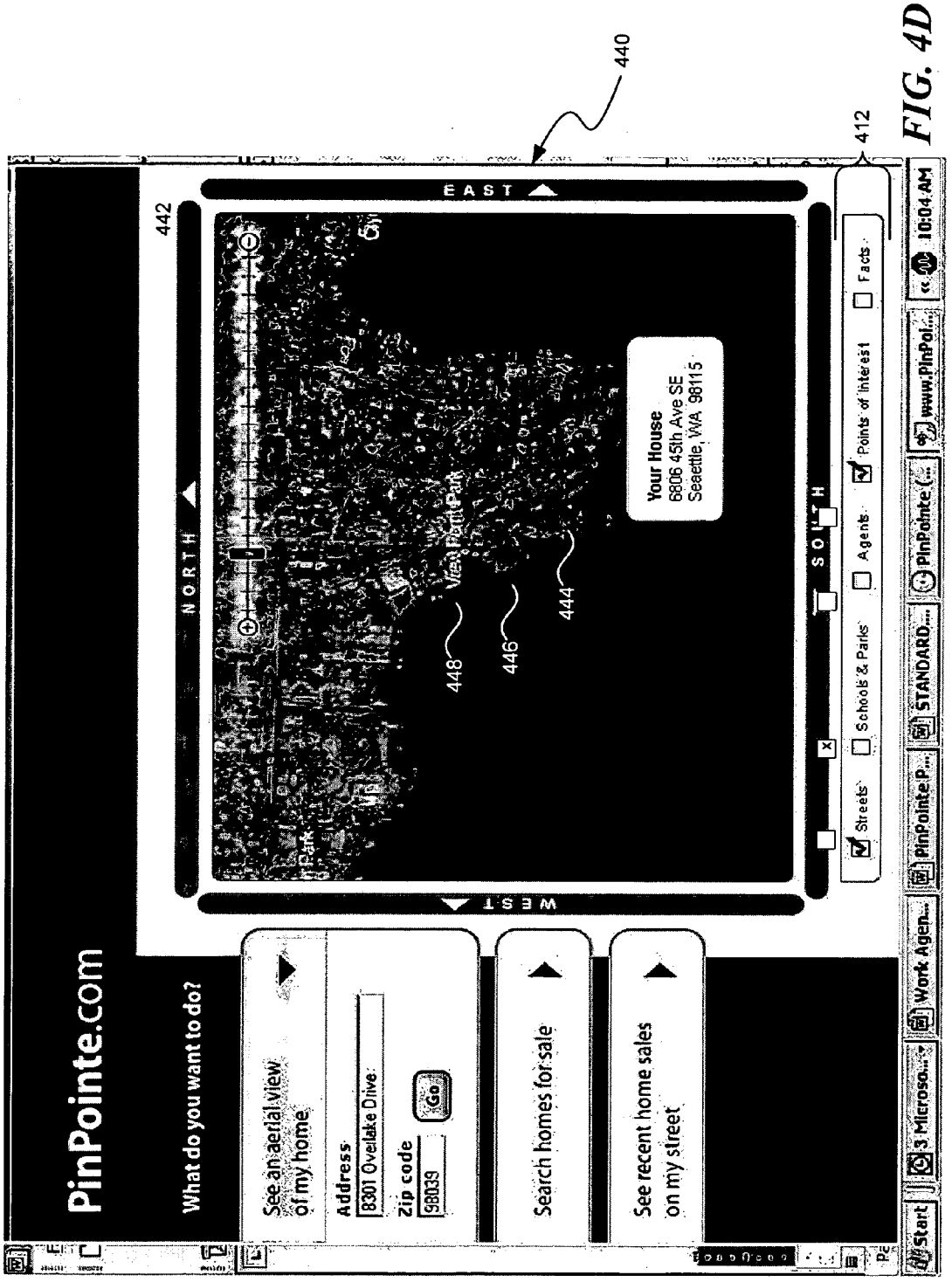

440
412
442
PinPointe.com
What do you want to do?
See an aerial view of my home
Address
8301 Overlake Drive
Zip code
98039
Go
Search homes for sale
See recent home sales on my street
NORTH
EAST
SOUTH
WEST
Your House
6806 45th Ave SE
Seattle, WA 98115
448
446
444
Streets
Schools & Parks
Agents
Points of Interest
Facts
Start
10:04 AM

FIG. 4D

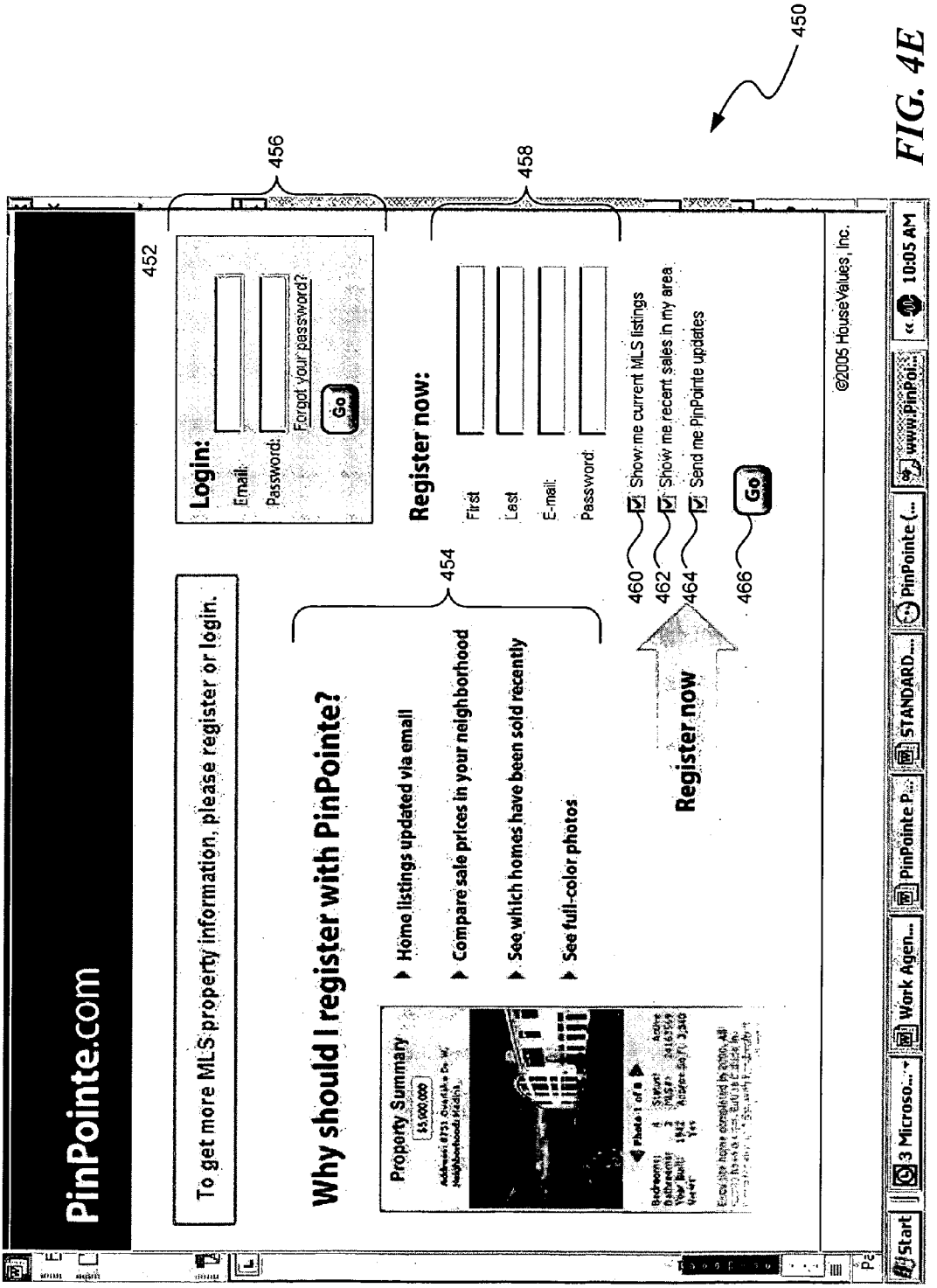

450
456
458
452
PinPointe.com
To get more MLS property information, please register or login.
Login:
Email:
Password:
Forgot your password?
Go
Register now:
First
Last
E-mail:
Password
Show me current MLS listings
Show me recent sales in my area
Send me PinPointe updates
Go
Why should I register with PinPointe?
Home listings updated via email
Compare sale prices in your neighborhood
See which homes have been sold recently
See full-color photos
454
460
462
464
466
Register now
Property Summary
©2005 HouseValues, Inc.
Start
10:05 AM

FIG. 4E

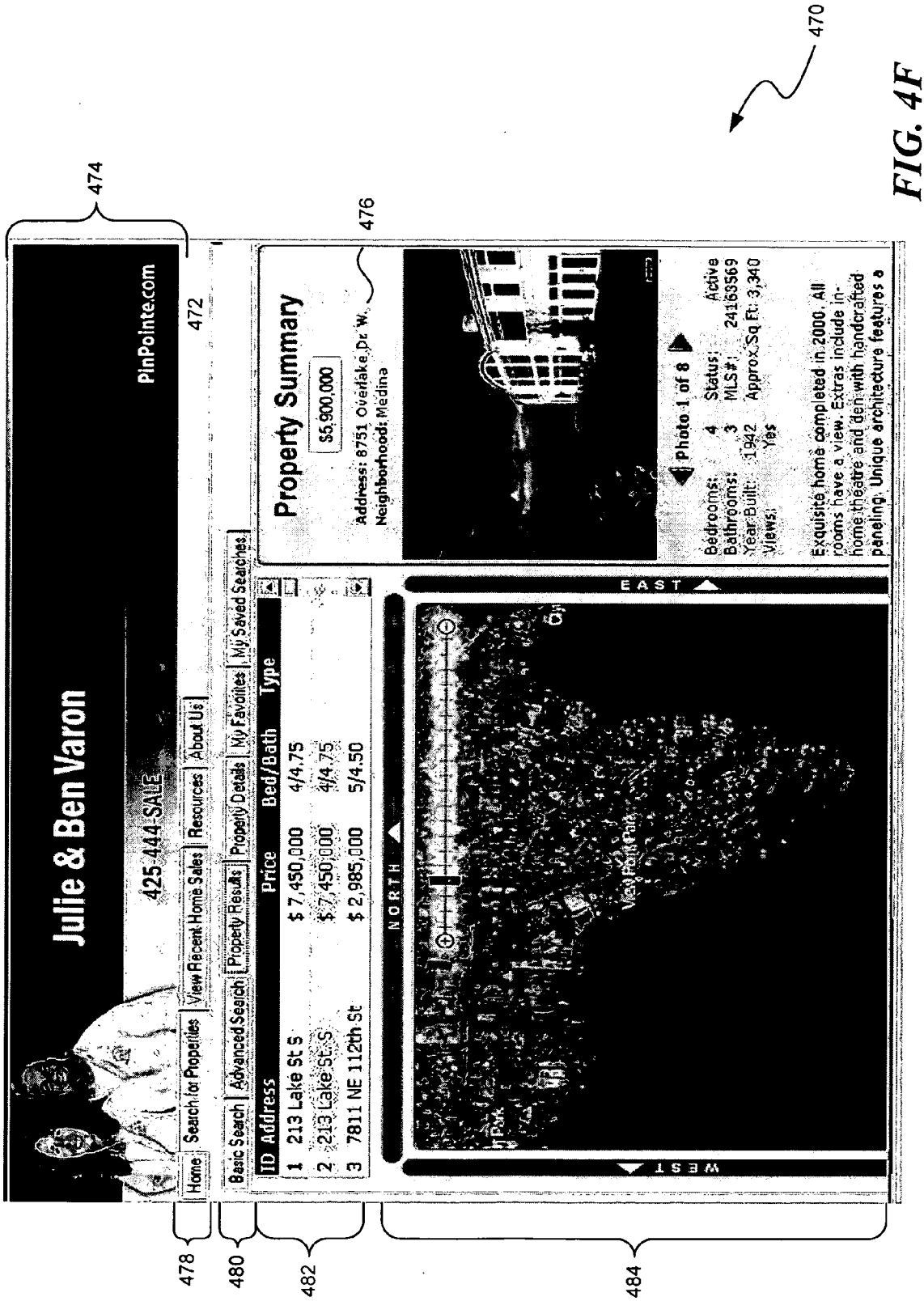

470
474
472
476
478
480
482
484
Julie & Ben Varon
425.444.SALE
PinPointe.com
Home
Search for Properties
View Recent Home Sales
Resources
About Us
Basic Search
Advanced Search
Property Results
Property Details
My Favorites
My Saved Searches
ID Address Price Bed/Bath Type
1 213 Lake St S $ 7,450,000 4/4.75
2 213 Lake St S $ 7,450,000 4/4.75
3 7811 NE 112th St $ 2,985,000 5/4.50
Property Summary
$5,900,000
Address: 8751 Overlake Dr W.
Neighborhood: Medina
Photo 1 of 8
Bedrooms: 4
Bathrooms: 3
Year Built: 1942
Views: Yes
Status: Active
MLS#: 24165569
Approx.Sq Ft: 3,340
Exquisite home completed in 2000. All rooms have a view. Extras include in-home theatre and den with handcrafted paneling. Unique architecture features a
NORTH
EAST
WEST

FIG. 4F

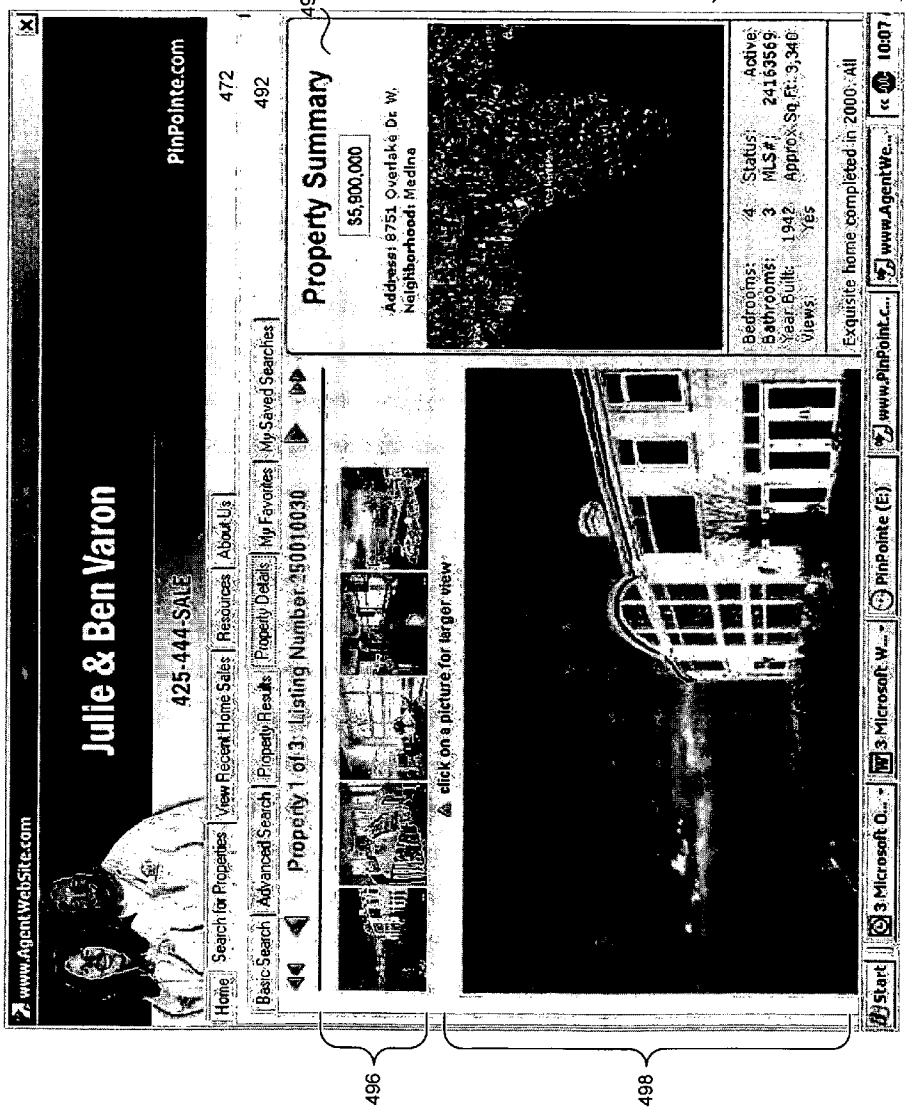

www.AgentWebSite.com
Julie & Ben Varon
425-444-SALE
PinPointe.com
Home
Search for Properties
View Recent Home Sales
Resources
About Us
Basic Search
Advanced Search
Property Results
Property Details
My Favorites
My Saved Searches
Property 1 of 3: Listing Number 25010030
click on a picture for larger view
Property Summary
$5,900,000
Address: 8751 Overlake Dr W.
Neighborhood: Medina
Bedrooms: 4
Bathrooms: 3
Year Built: 1942
Views: Yes
Status: Active
MLS #: 24163569
Approx Sq Ft: 3,340
Exquisite home completed in 2000. All
Start
3 Microsoft O...
3 Microsoft W...
PinPointe (Ei)
www.PinPointe.c...
www.AgentWe...
10:07
472
492
494
490
496
498

FIG. 4G

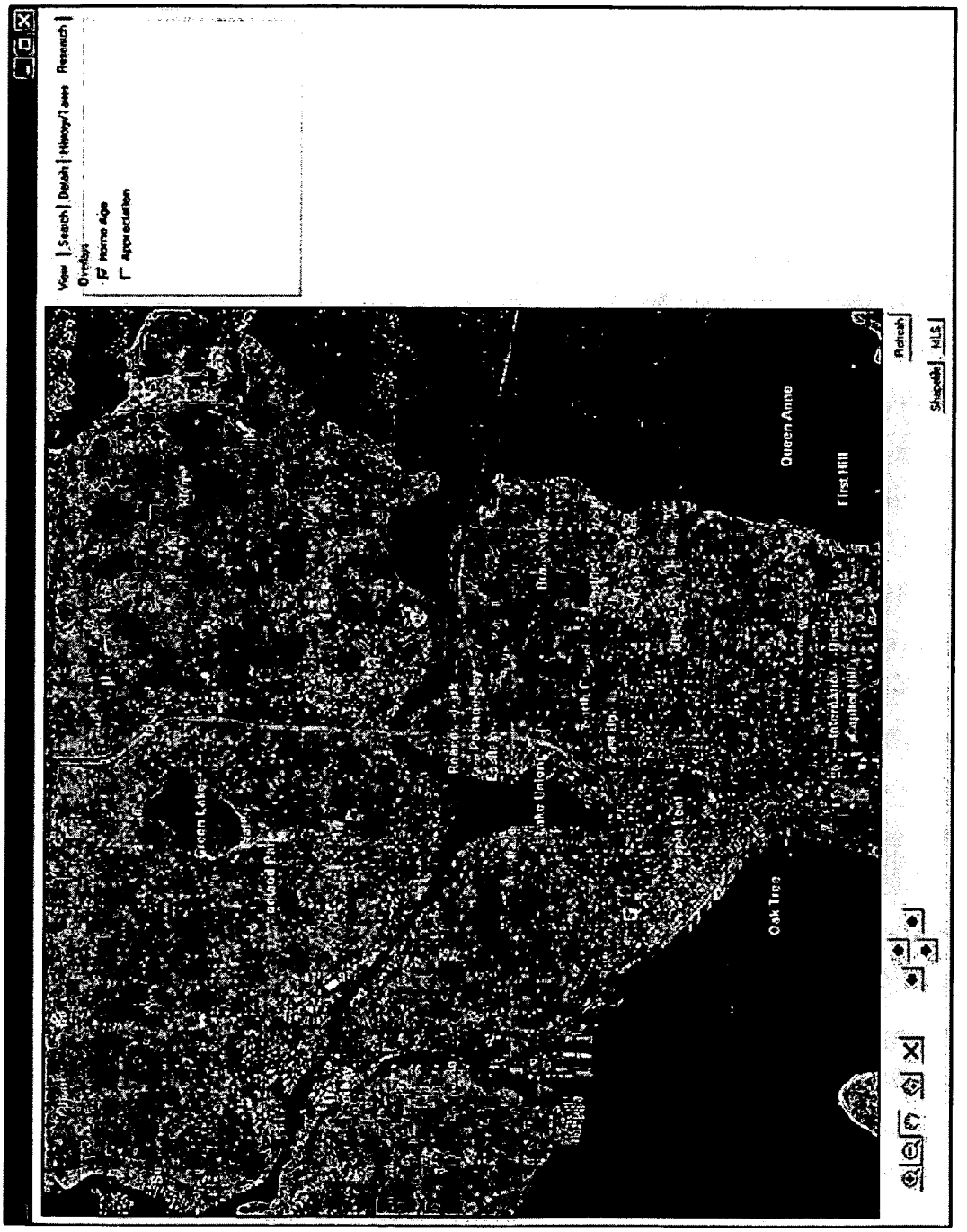

View | Search | Details | History/Faves | Research |
Overlays
Home Age
Appreciation
Queen Anne
First Hill
Oak Tree
Refresh
Shapefile
MLS

FIG. 5A

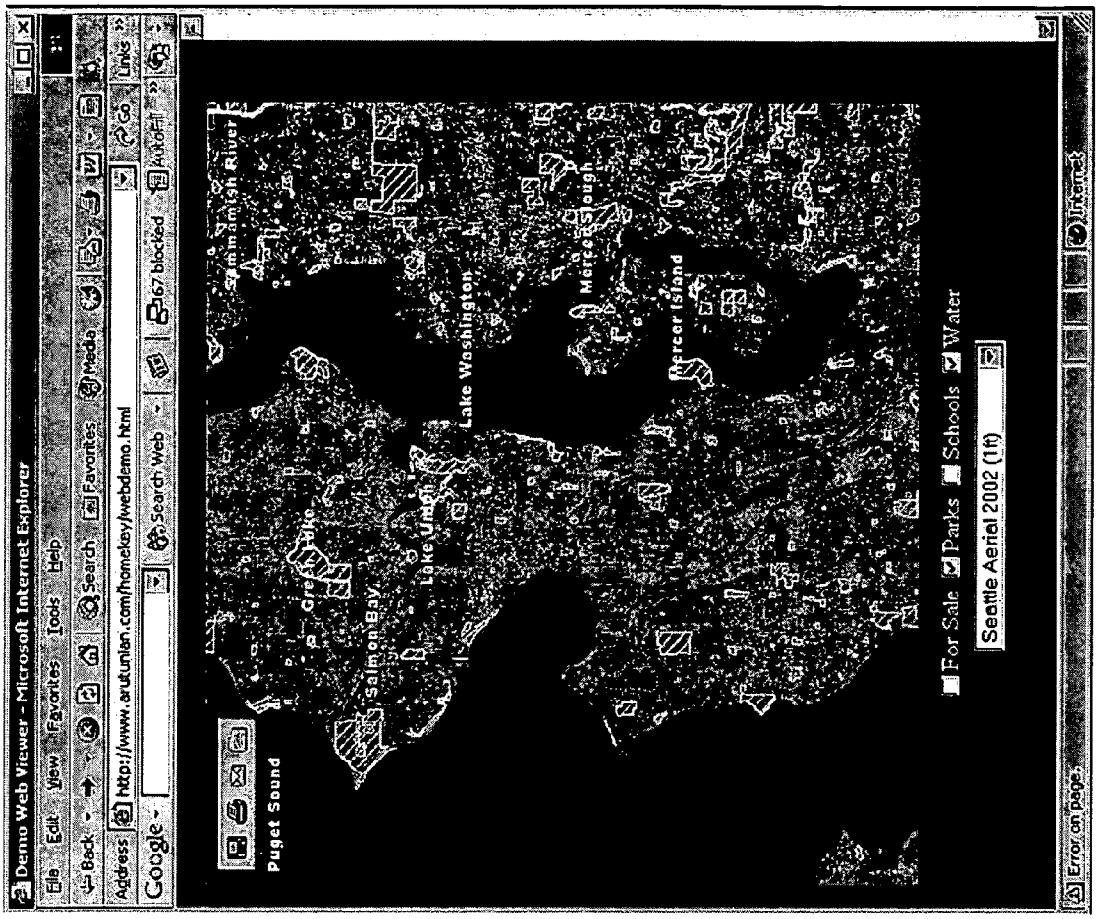

Demo Web Viewer - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.arutunian.com/homekey/webdemo.html
Google
Search Web
Puget Sound
Lake Washington
Mercer Island
Mercer Slough
For Sale
Parks
Schools
Water
Seattle Aerial 2002 (1ft)
Internet

*FIG. 5B*

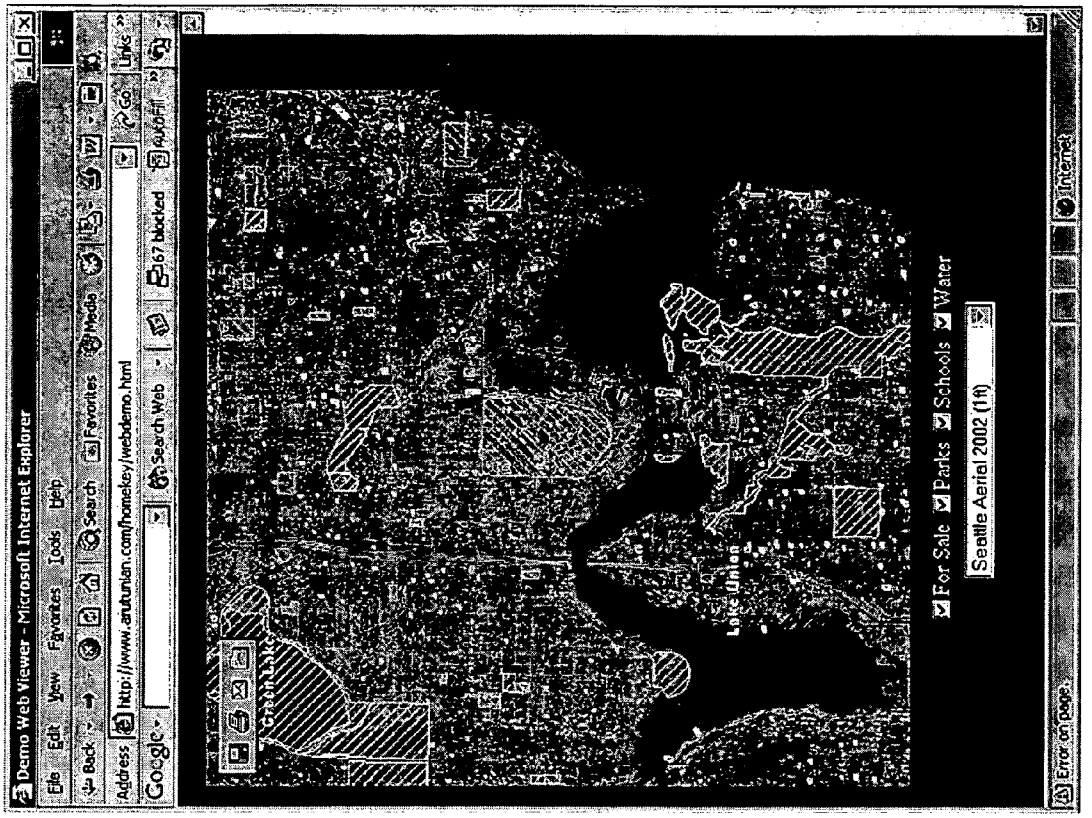

Demo Web Viewer - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.arutunian.com/homekey/webdemo.html
Google Search Web 67 blocked AutoFill
Lake Union
For Sale
Parks
Schools
Water
Seattle Aerial 2002 (1ft)
Internet

FIG. 5C

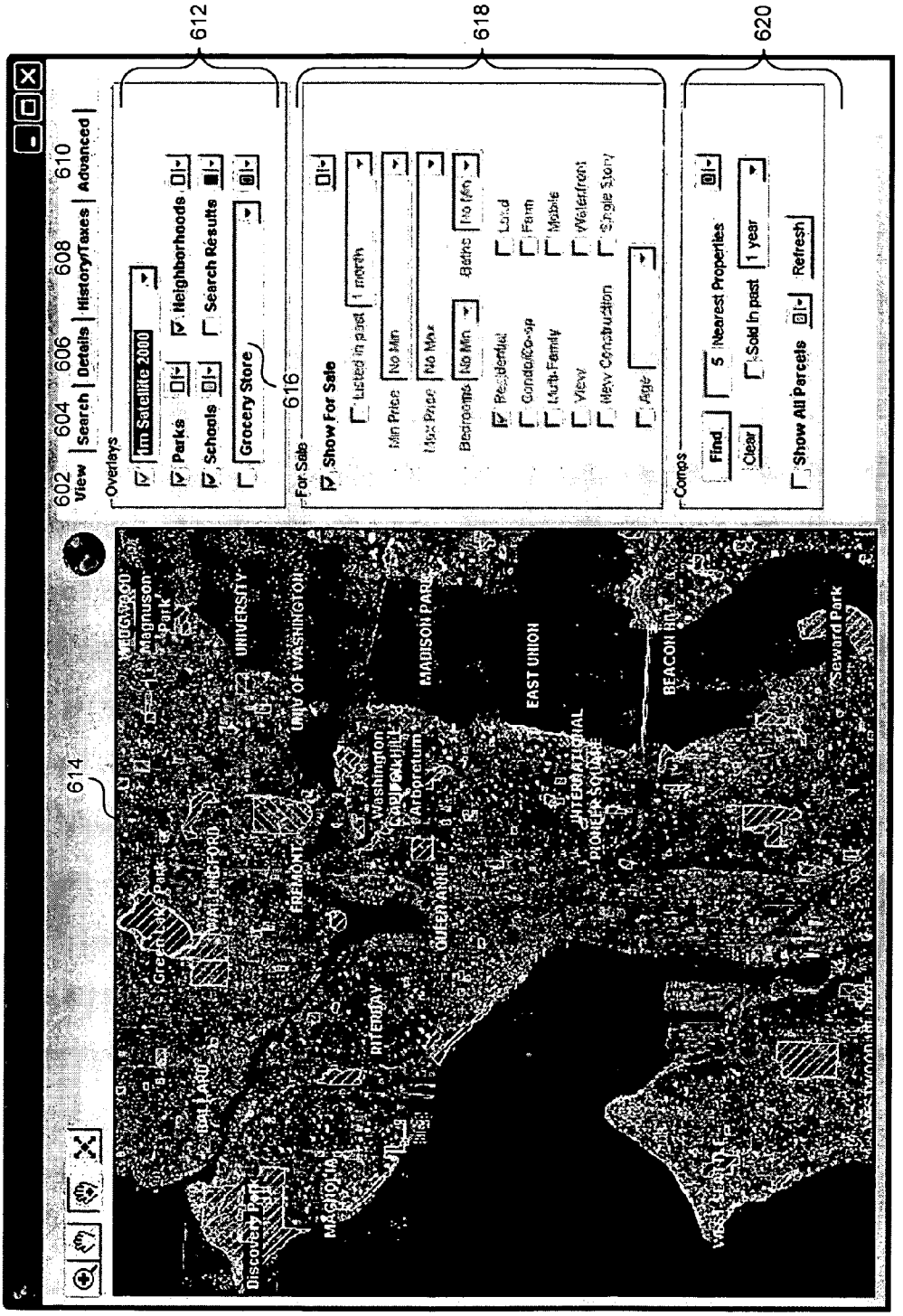

602
604
606
608
610
612
614
616
618
620
View
Search
Details
History/Taxes
Advanced
Overlays
Im Satellite 2000
Parks
Neighborhoods
Schools
Search Results
Grocery Store
For Sale
Show For Sale
Listed in past
1 month
Min Price
No Min
Max Price
No Max
Bedrooms
Baths
Residential
Land
Condo/Co-op
Farm
Multi-Family
Mobile
View
Waterfront
New Construction
Single Story
Age
Comps
Find
5 Nearest Properties
Clear
Sold in past
1 year
Show All Parcels
Refresh
UNIVERSITY
MADISON PARK
EAST UNION
BEACON HILL
Seward Park

*FIG. 6*

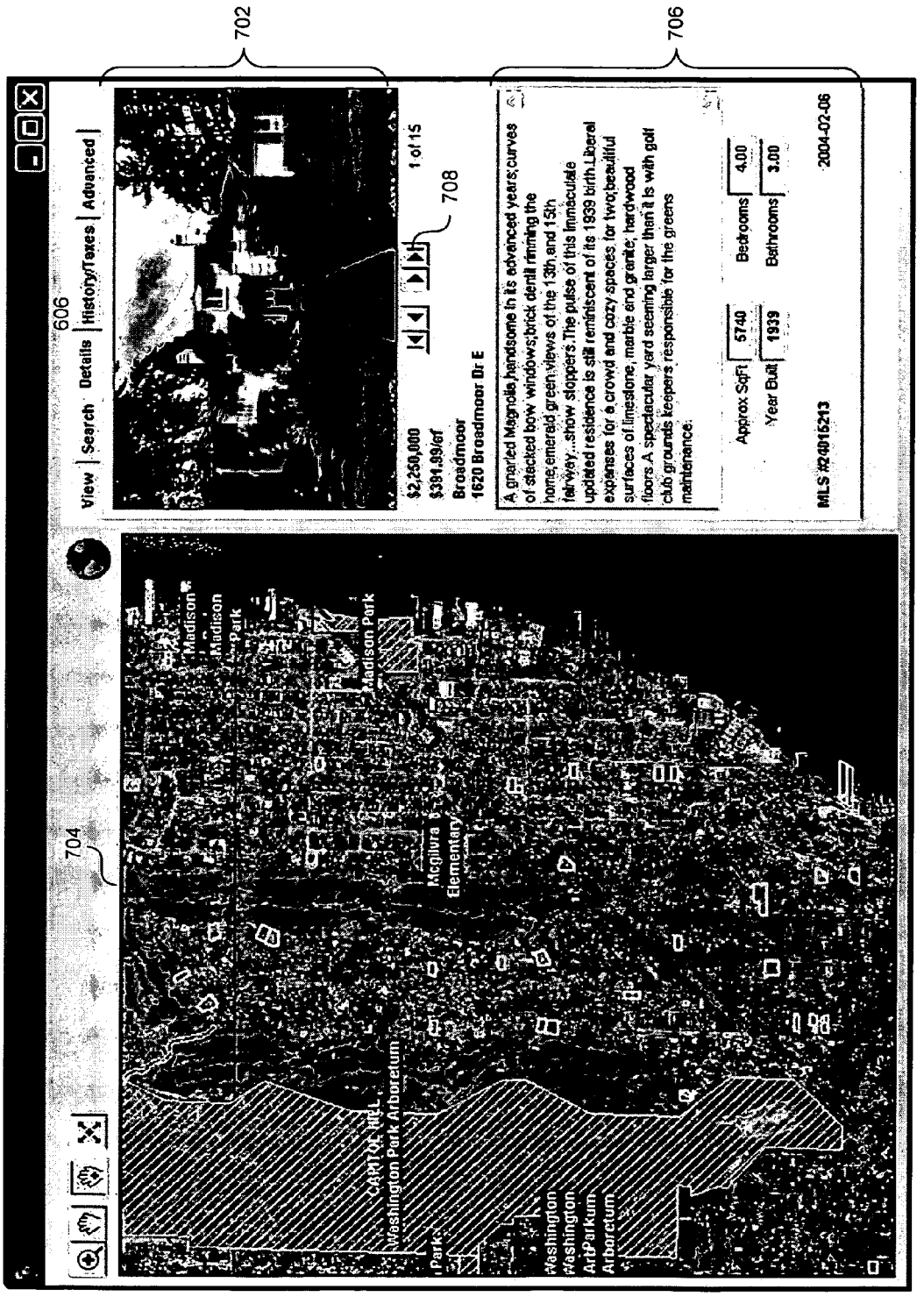

702
706
704
606
708
View | Search | Details | History/Taxes | Advanced
1 of 15
$2,250,000
$391.99/sf
Broadmoor
1620 Broadmoor Dr E
A gnarled Magnolia,handsome in its advanced years;curves of stacked bow windows;brick dentil rimming the home;emerald green;views of the 13th and 15th fairway...show stoppers.The pulse of this immaculate updated residence is still reminiscent of its 1939 birth.Liberal expanses for a crowd and cozy spaces for two;beautiful surfaces of limestone, marble and granite; hardwood floors.A spectacular yard seeming larger than it is with golf club grounds keepers responsible for the greens maintenance.
Approx SqFt 5740
Bedrooms 4.00
Year Built 1939
Bathrooms 3.00
MLS #2401615213
2004-02-06
Madison
Madison
Park
Madison Park
Mcgilvra
Elementary
CAPITOL HILL
Washington Park Arboretum
Park
Washington
Washington
ArtParkKum
Arboretum

*FIG. 7*

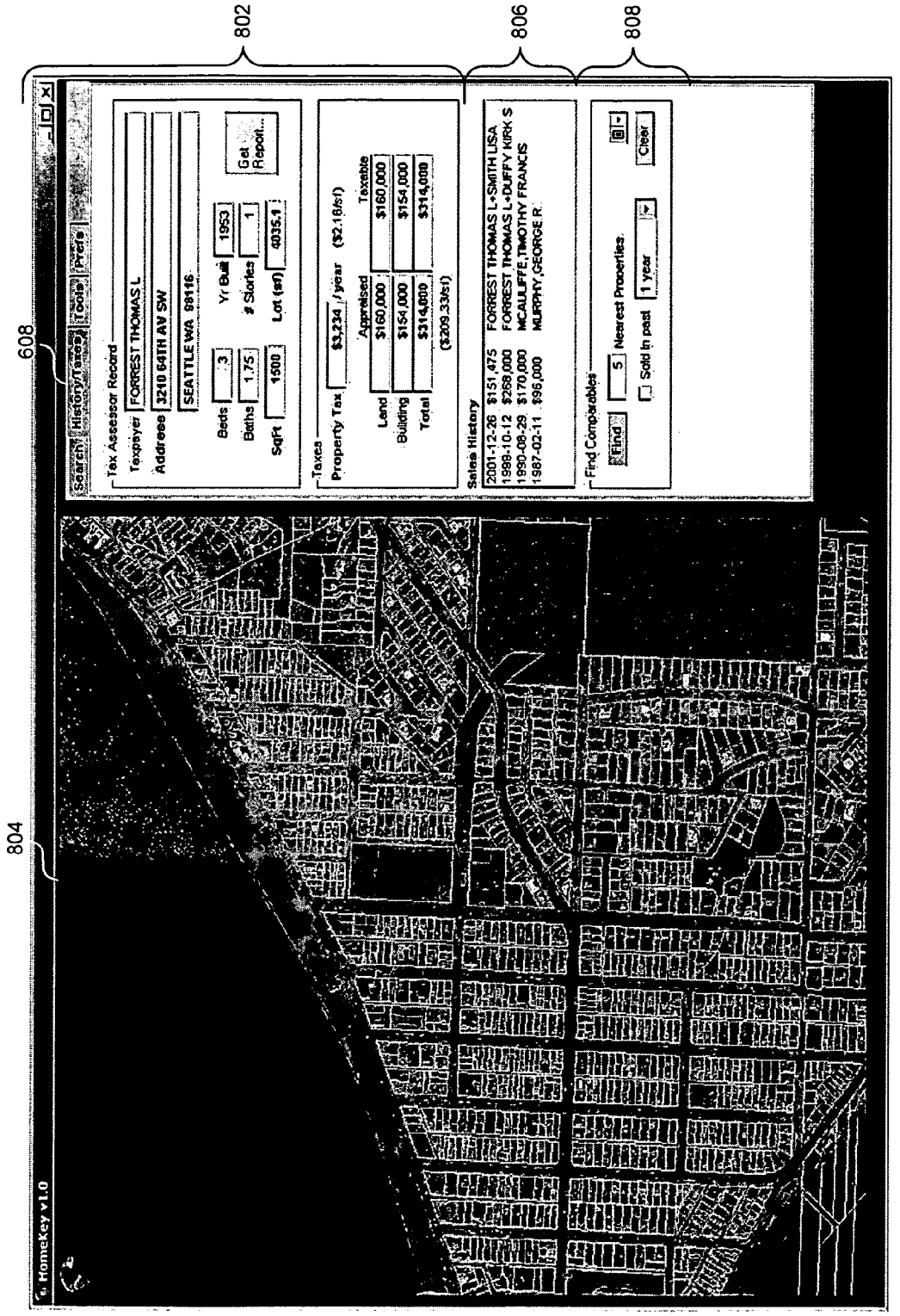

802
806
808
608
804
Search
History/Taxes
Tools
Photo
Tax Assessor Record
Taxpayer
FORREST THOMAS L
Address
3210 64TH AV SW
SEATTLE WA 98116
Beds
3
Baths
1.75
Sqft
1600
Yr Built
1953
# Stories
1
Lot (sf)
6035.1
Get Report...
Taxes
Property Tax
$3,234 / year ($2.18/sf)
Appraised
Taxable
Land
$160,000
$160,000
Building
$154,000
$154,000
Total
$314,000
$314,000
($209.33/sf)
Sales History
2001-12-26 $151,475 FORREST THOMAS L+SMITH LISA
1998-10-12 $268,000 FORREST THOMAS L+DUFFY KIRK S
1990-08-29 $170,000 MCAULIFFE,TIMOTHY FRANCIS
1987-02-11 $95,000 MURPHY,GEORGE R
Find Comparables
Find
5
Nearest Properties
Sold in past
1 year
Clear
HomeKey v1.0

*FIG. 8*

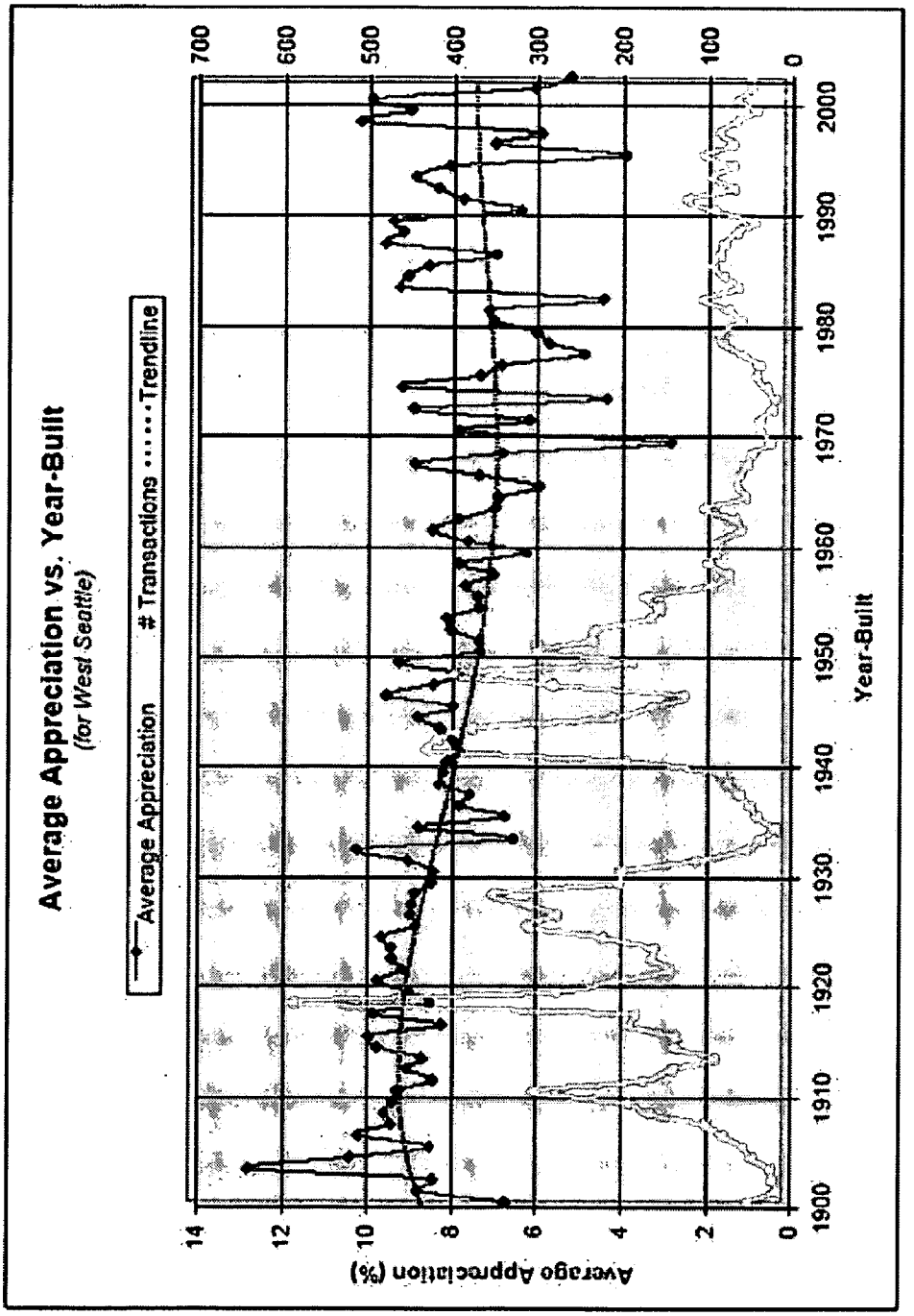

Average Appreciation vs. Year-Built
(for West Seattle)
Average Appreciation
# Transactions
Trendline
Average Appreciation (%)
Year-Built
0
2
4
6
8
10
12
14
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
0
100
200
300
400
500
600
700

*FIG. 9A*

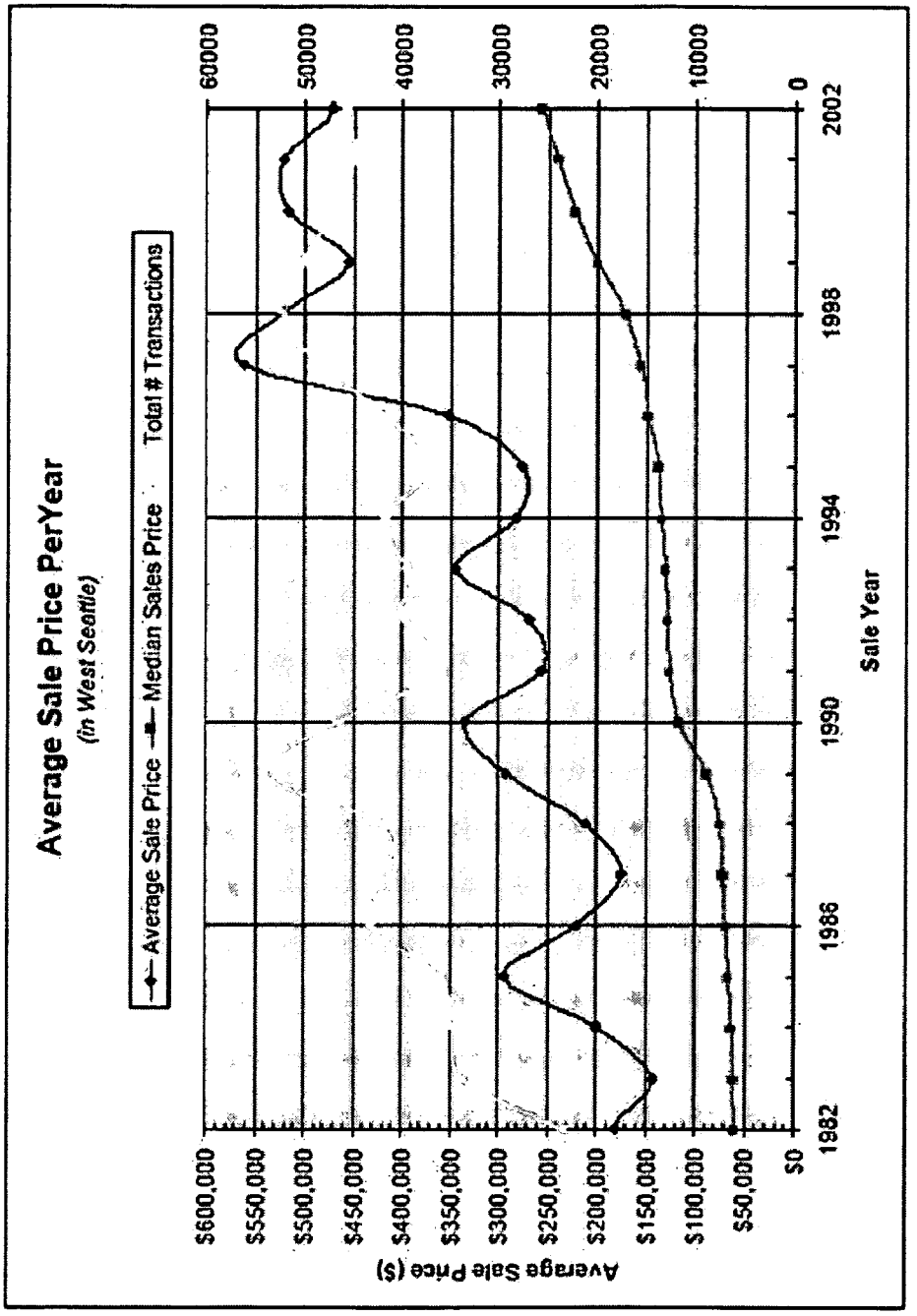

Average Sale Price PerYear
(In West Seattle)
Average Sale Price
Median Sales Price
Total # Transactions
Average Sale Price ($)
$600,000
$550,000
$500,000
$450,000
$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
60000
50000
40000
30000
20000
10000
0
1982
1986
1990
1994
1998
2002
Sale Year

*FIG. 9B*

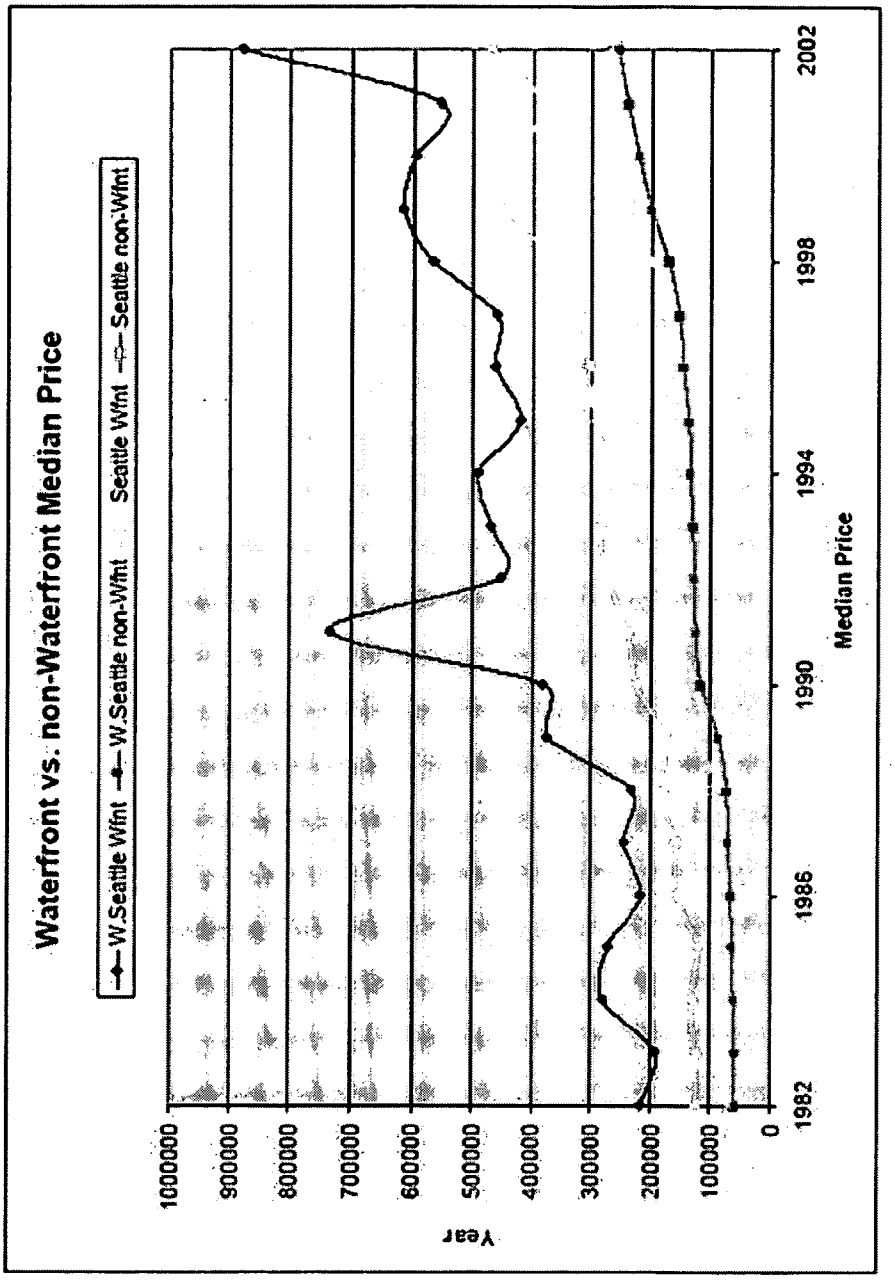

Waterfront vs. non-Waterfront Median Price
W.Seattle Wfnt
W.Seattle non-Wfnt
Seattle Wfnt
Seattle non-Wfnt
Year
Median Price
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
1982
1986
1990
1994
1998
2002

*FIG. 9C*

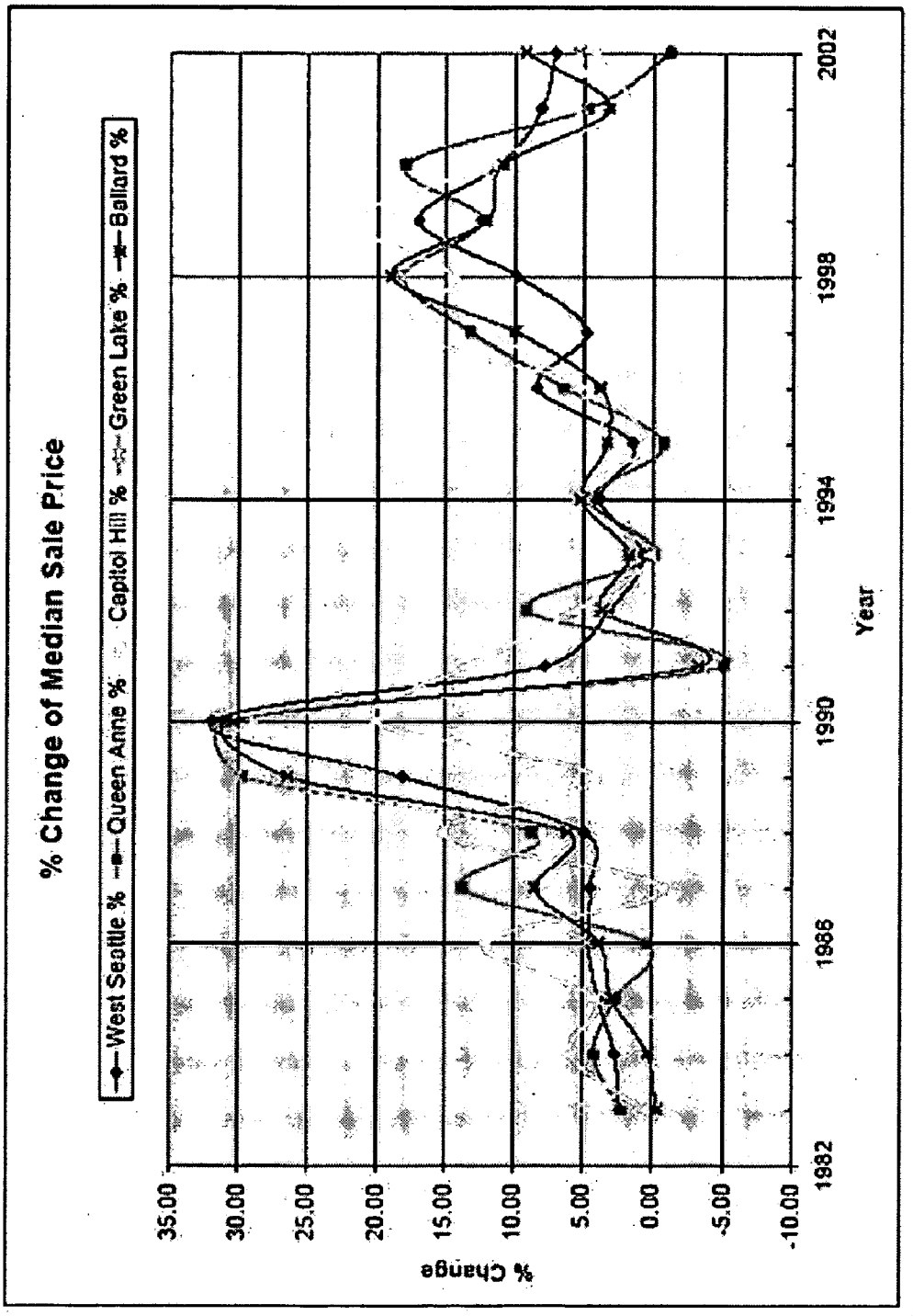

% Change of Median Sale Price
West Seattle %
Queen Anne %
Capitol Hill %
Green Lake %
Ballard %
% Change
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
1982
1986
1990
1994
1998
2002
Year

FIG. 9D

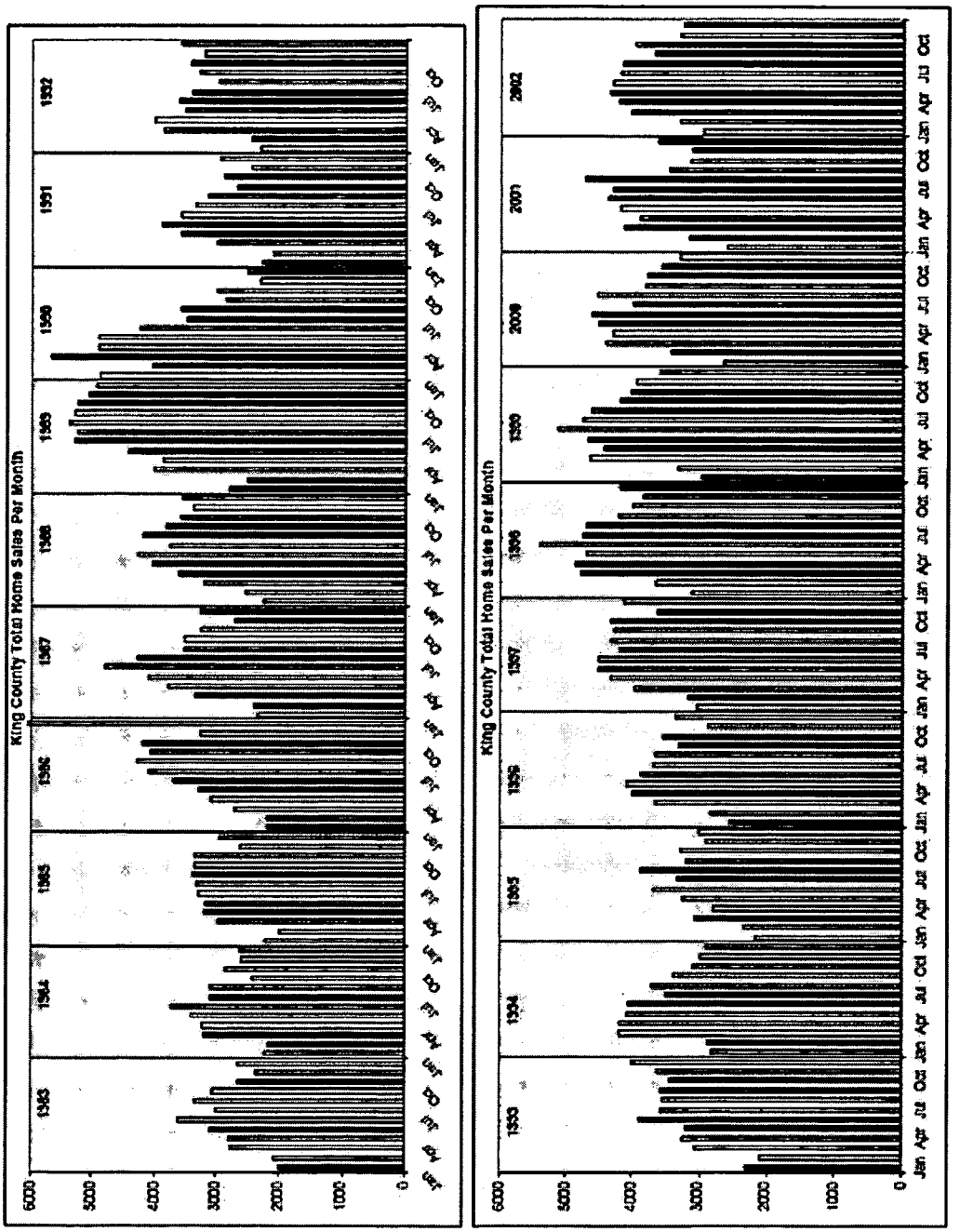

King County Total Home Sales Per Month
6000
5000
4000
3000
2000
1000
0
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul Oct

*FIG. 9E*

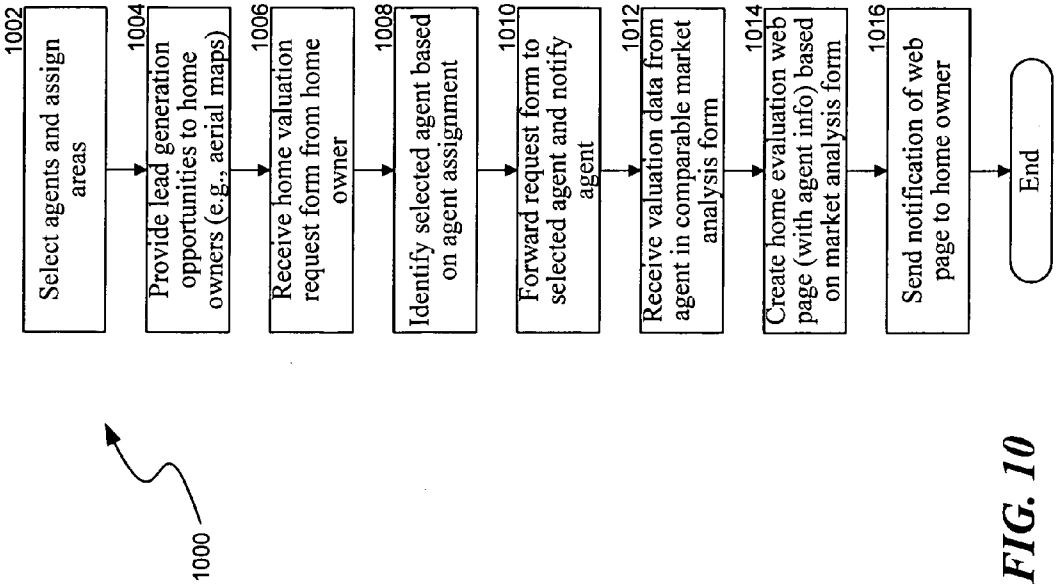

1002
Select agents and assign areas
1004
Provide lead generation opportunities to home owners (e.g., aerial maps)
1006
Receive home valuation request form from home owner
1008
Identify selected agent based on agent assignment
1010
Forward request form to selected agent and notify agent
1012
Receive valuation data from agent in comparable market analysis form
1014
Create home evaluation web page (with agent info) based on market analysis form
1016
Send notification of web page to home owner
End
1000

*FIG. 10*

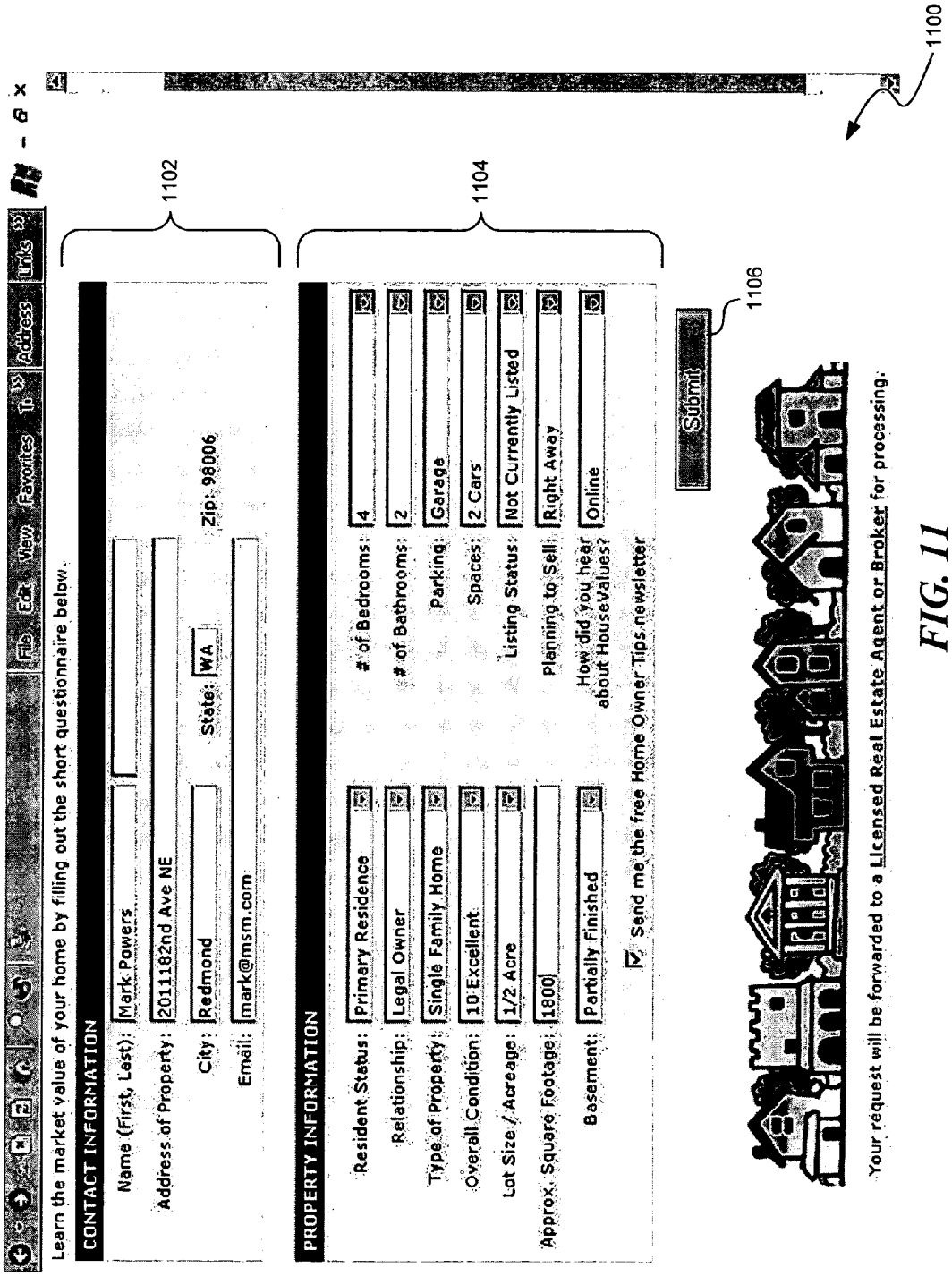

1100
1102
1104
1106
Learn the market value of your home by filling out the short questionnaire below.
CONTACT INFORMATION
Name (First, Last): Mark Powers
Address of Property: 2011182nd Ave NE
City: Redmond
State: WA
Zip: 98006
Email: mark@msm.com
PROPERTY INFORMATION
Resident Status: Primary Residence
Relationship: Legal Owner
Type of Property: Single Family Home
Overall Condition: 10 Excellent
Lot Size / Acreage: 1/2 Acre
Approx. Square Footage: 1800
Basement: Partially Finished
# of Bedrooms: 4
# of Bathrooms: 2
Parking: Garage
Spaces: 2 Cars
Listing Status: Not Currently Listed
Planning to Sell: Right Away
How did you hear about HouseValues? Online
Send me the free Home Owner Tips newsletter
Submit
Your request will be forwarded to a Licensed Real Estate Agent or Broker for processing.

*FIG. 11*

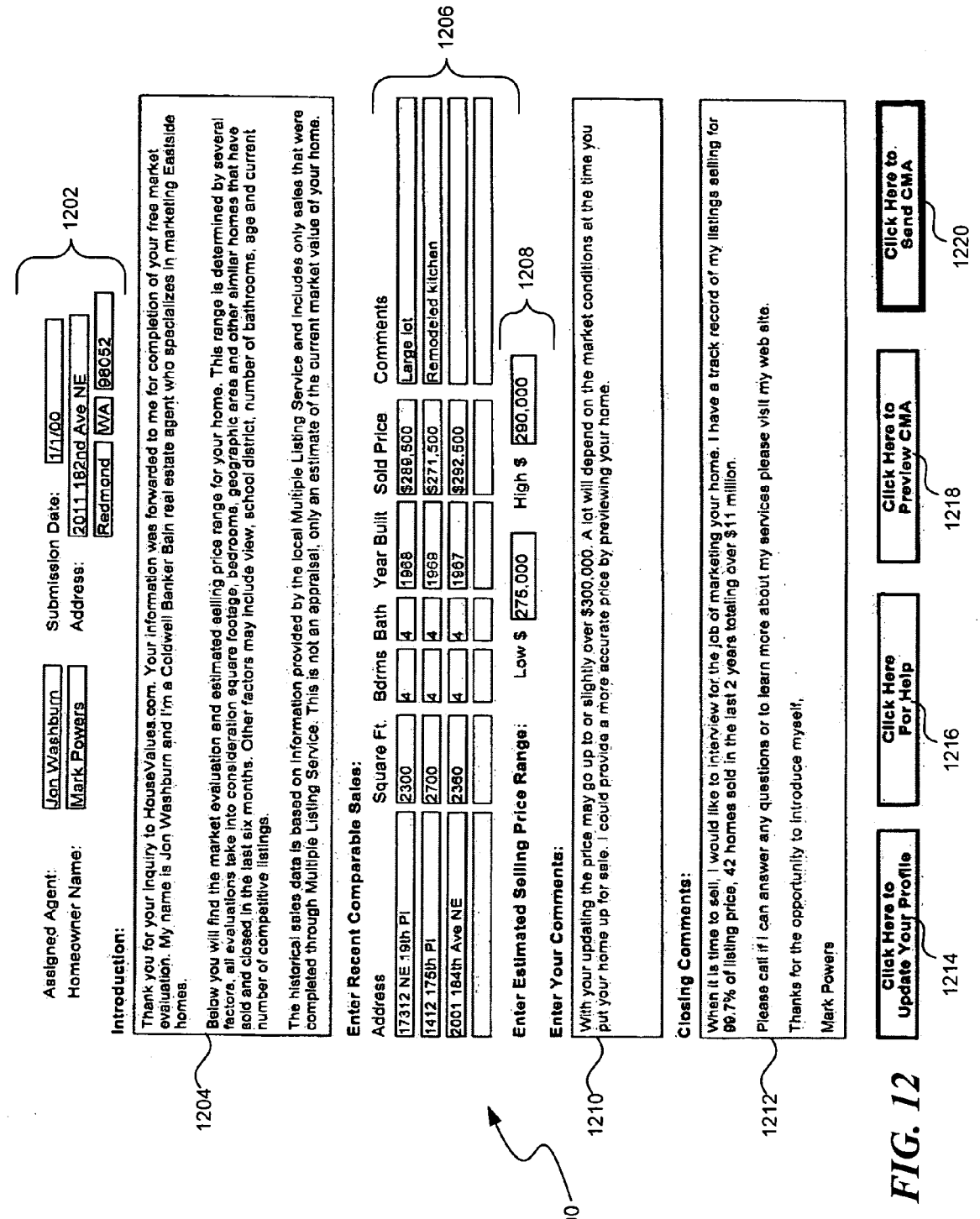

Assigned Agent: Jon Washburn
Homeowner Name: Mark Powers
Submission Date: 1/1/00
Address: 2011 182nd Ave NE
Redmond WA 98052
1202
Introduction:
Thank you for your inquiry to HouseValues.com. Your information was forwarded to me for completion of your free market evaluation. My name is Jon Washburn and I'm a Coldwell Banker Bain real estate agent who specializes in marketing Eastside homes.
Below you will find the market evaluation and estimated selling price range for your home. This range is determined by several factors, all evaluations take into consideration square footage, bedrooms, geographic area and other similar homes that have sold and closed in the last six months. Other factors may include view, school district, number of bathrooms, age and current number of competitive listings.
The historical sales data is based on information provided by the local Multiple Listing Service and includes only sales that were completed through Multiple Listing Service. This is not an appraisal, only an estimate of the current market value of your home.
1204
Enter Recent Comparable Sales:
1206
Address | Square Ft. | Bdrms | Bath | Year Built | Sold Price | Comments
17312 NE 19th Pl | 2300 | 4 | 4 | 1968 | $289,500 | Large lot
1412 175th Pl | 2700 | 4 | 4 | 1968 | $271,500 | Remodeled kitchen
2001 184th Ave NE | 2360 | 4 | 4 | 1967 | $292,500
Enter Estimated Selling Price Range: Low $ 275,000 High $ 290,000
1208
Enter Your Comments:
With your updating the price may go up to or slightly over $300,000. A lot will depend on the market conditions at the time you put your home up for sale. I could provide a more accurate price by previewing your home.
1210
Closing Comments:
When it is time to sell, I would like to interview for the job of marketing your home. I have a track record of my listings selling for 99.7% of listing price, 42 homes sold in the last 2 years totaling over $11 million.
Please call if I can answer any questions or to learn more about my services please visit my web site.
Thanks for the opportunity to introduce myself,
Mark Powers
1212
1200
Click Here to Update Your Profile
1214
Click Here For Help
1216
Click Here to Preview CMA
1218
Click Here to Send CMA
1220

FIG. 12

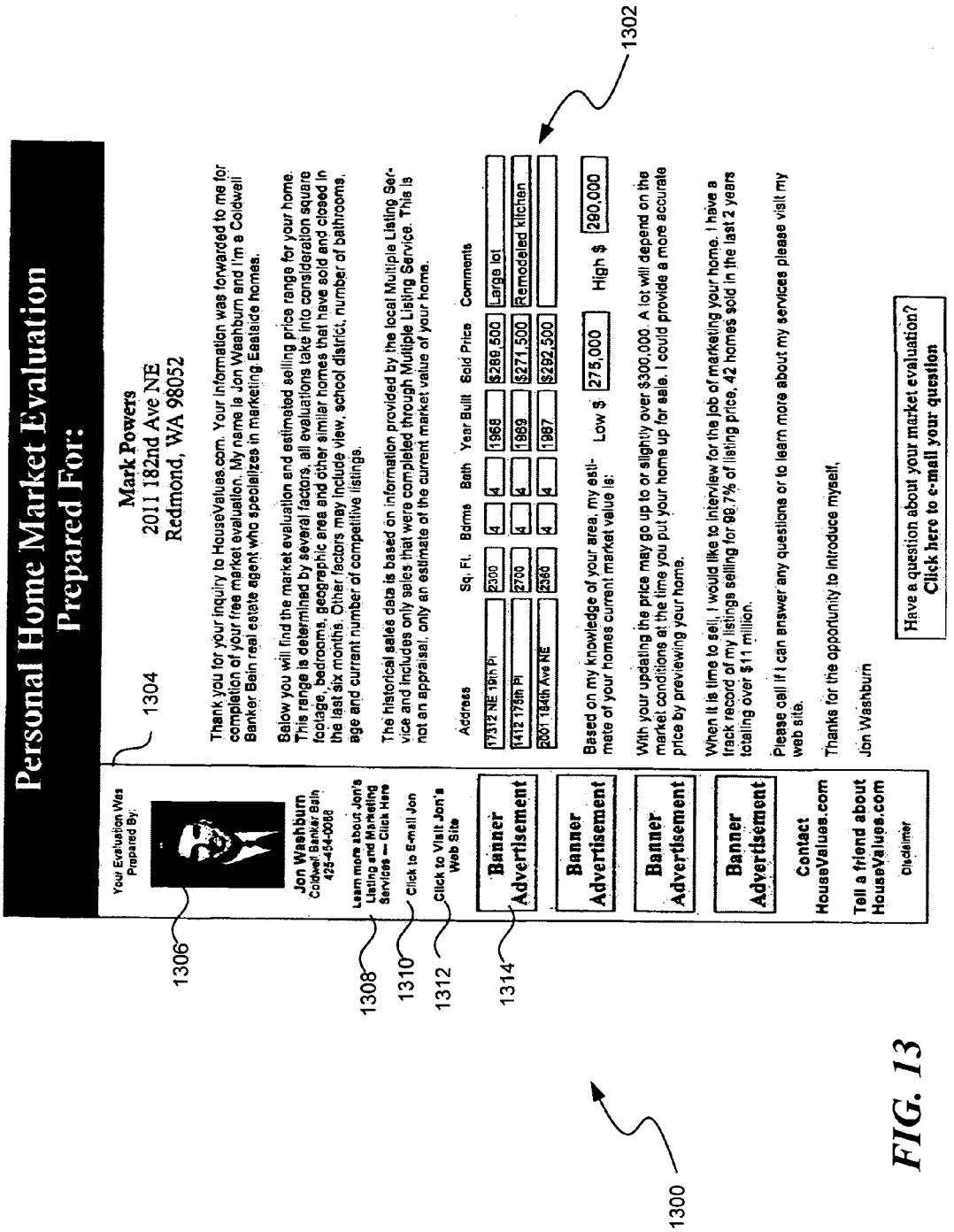

Personal Home Market Evaluation
Prepared For:
Mark Powers
2011 182nd Ave NE
Redmond, WA 98052
1304
Your Evaluation Was Prepared By:
Jon Washburn
Coldwell Banker Bain
425-454-0088
Learn more about Jon's Listing and Marketing Services — Click Here
Click to E-mail Jon
Click to Visit Jon's Web Site
Banner Advertisement
Banner Advertisement
Banner Advertisement
Banner Advertisement
Contact HouseValues.com
Tell a friend about HouseValues.com
Disclaimer
Thank you for your inquiry to HouseValues.com. Your information was forwarded to me for completion of your free market evaluation. My name is Jon Washburn and I'm a Coldwell Banker Bain real estate agent who specializes in marketing Eastside homes.
Below you will find the market evaluation and estimated selling price range for your home. This range is determined by several factors, all evaluations take into consideration square footage, bedrooms, geographic area and other similar homes that have sold and closed in the last six months. Other factors may include view, school district, number of bathrooms, age and current number of competitive listings.
The historical sales data is based on information provided by the local Multiple Listing Service. This is not an appraisal, only an estimate of the current market value of your home.
Address Sq. Ft. Bdrms Bath Year Built Sold Price Comments
17312 NE 19th Pl 2300 4 4 1968 $288,500 Large lot
1412 175th Pl 2700 4 4 1969 $271,500 Remodeled kitchen
2001 184th Ave NE 2580 4 4 1987 $282,500
Based on my knowledge of your area, my estimate of your homes current market value is: Low $ 275,000 High $ 290,000
With your updating the price may go up to or slightly over $300,000. A lot will depend on the market conditions at the time you put your home up for sale. I could provide a more accurate price by previewing your home.
When it is time to sell, I would like to interview for the job of marketing your home. I have a track record of my listings selling for 98.7% of listing price, 42 homes sold in the last 2 years totalling over $11 million.
Please call if I can answer any questions or to learn more about my services please visit my web site.
Thanks for the opportunity to introduce myself,
Jon Washburn
Have a question about your market evaluation? Click here to e-mail your question
1300
1302
1306
1308
1310
1312
1314

*FIG. 13*

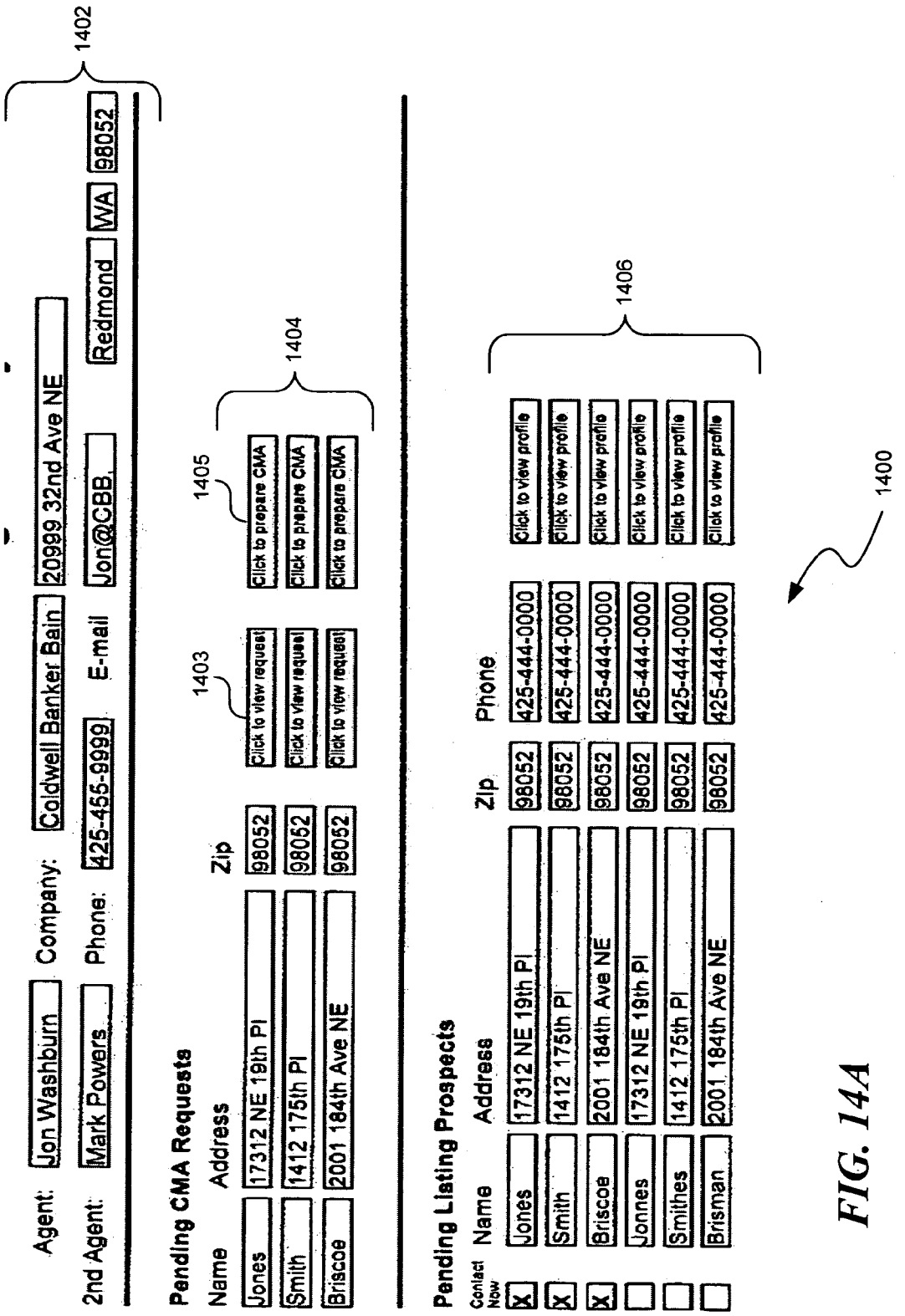

1402
Agent: Jon Washburn Company: Coldwell Banker Bain 20999 32nd Ave NE
2nd Agent: Mark Powers Phone: 425-455-9999 E-mail Jon@CBB Redmond WA 98052
Pending CMA Requests
Name Address Zip
Jones 17312 NE 19th Pl 98052
Smith 1412 175th Pl 98052
Briscoe 2001 184th Ave NE 98052
1403
Click to view request
Click to view request
Click to view request
1405
Click to prepare CMA
Click to prepare CMA
Click to prepare CMA
1404
Pending Listing Prospects
Contact Now
Name Address Zip Phone
X Jones 17312 NE 19th Pl 98052 425-444-0000
X Smith 1412 175th Pl 98052 425-444-0000
X Briscoe 2001 184th Ave NE 98052 425-444-0000
Jonnes 17312 NE 19th Pl 98052 425-444-0000
Smithes 1412 175th Pl 98052 425-444-0000
Brisman 2001 184th Ave NE 98052 425-444-0000
Click to view profile
Click to view profile
Click to view profile
Click to view profile
Click to view profile
Click to view profile
1406
1400

*FIG. 14A*

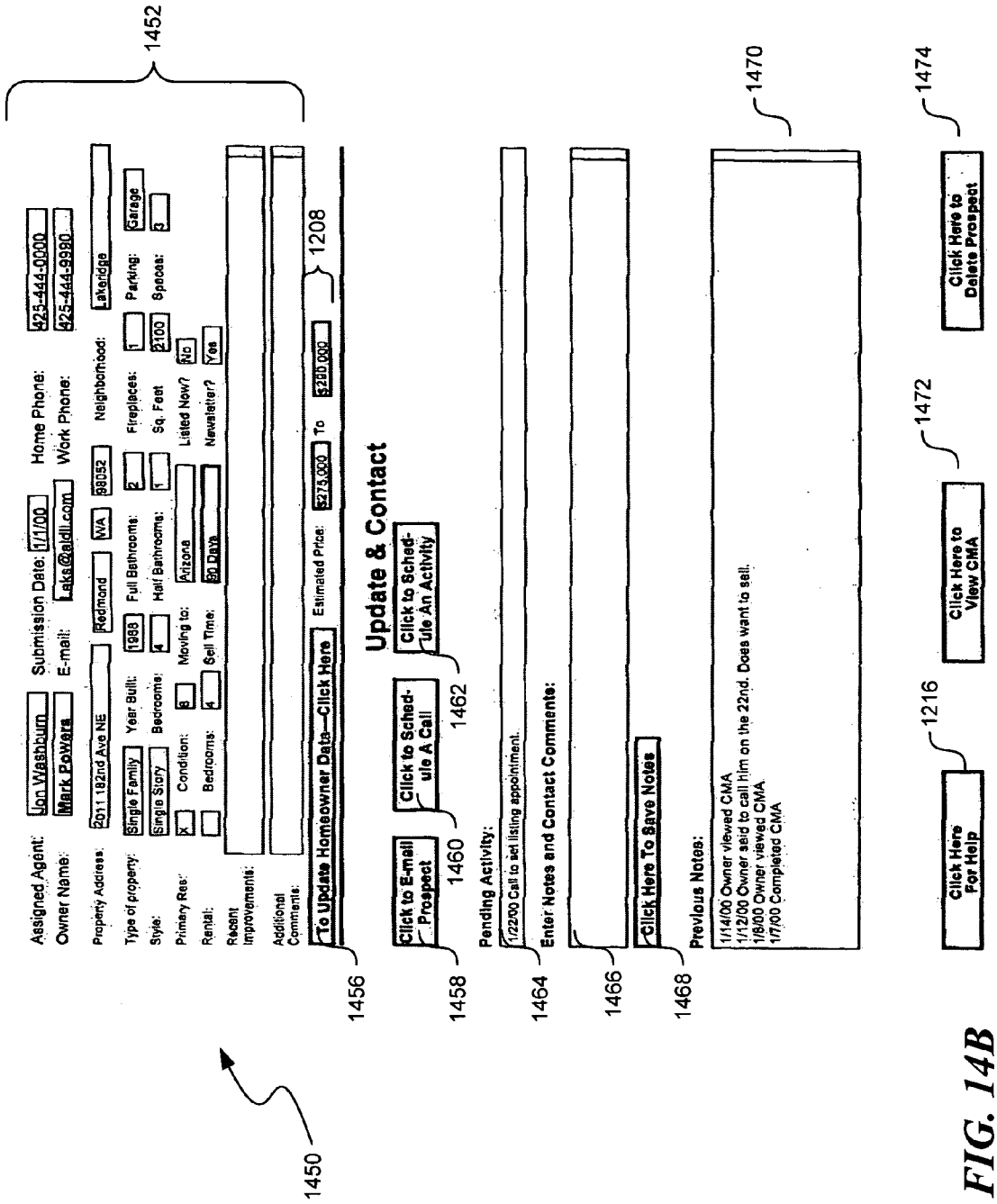

1450
1452
Assigned Agent: Jon Washburn
Owner Name: Mark Powers
Submission Date: 1/1/00
E-mail: Lake@aldll.com
Home Phone: 425-444-0000
Work Phone: 425-444-9990
Property Address: 2011 182nd Ave NE
Redmond
WA
98052
Neighborhood: Lakeridge
Type of property: Single Family
Year Built: 1988
Full Bathrooms: 2
Fireplaces: 1
Parking: Garage
Style: Single Story
Bedrooms: 4
Half Bathrooms: 1
Sq. Feet 2100
Spaces: 3
Primary Res: X
Condition: 8
Moving to: Arizona
Listed Now? No
Rental:
Bedrooms: 4
Sell Time: 60 Days
Newsletter? Yes
Recent Improvements:
Additional Comments:
To Update Homeowner Data—Click Here
1456
Estimated Price: $275,000 To $290,000
1208
Update & Contact
Click to E-mail Prospect
1458
Click to Schedule A Call
1460
Click to Schedule An Activity
1462
Pending Activity:
1/22/00 Call to set listing appointment.
1464
Enter Notes and Contact Comments:
1466
Click Here To Save Notes
1468
Previous Notes:
1/14/00 Owner viewed CMA
1/12/00 Owner said to call him on the 22nd. Does want to sell.
1/6/00 Owner viewed CMA
1/7/00 Completed CMA
1470
Click Here For Help
1216
Click Here to View CMA
1472
Click Here to Delete Prospect
1474

*FIG. 14B*

# SYSTEM AND METHOD UTILIZING ENHANCED IMAGERY AND ASSOCIATED OVERLAYS

## CROSS-REFERENCE TO RELATED APPLICATION(S)

[0001] This application claims the benefit of U.S. Provisional Application No. 60/667,370 entitled "System and Method Utilizing Enhanced Aerial Imagery, Such As For Providing Information Associated With Locations of Interest Including Real Estate," filed Mar. 31, 2005, and U.S. Provisional Application No. 60/658,858 entitled "Method and System for Commercial Use of Aerial Images," filed Mar. 3, 2005, which are both incorporated by reference.

## BACKGROUND

[0002] The Internet is increasingly being used to conduct "electronic commerce," in part, because it facilitates electronic communications between vendors and purchasers. For example, the Internet may be used to unite sellers of goods or services, such as with purchasers wishing to buy such goods or services. For example, some web sites allow users to enter specific data with respect to items they wish to purchase or sell. After uniting a buyer with one or more merchants, the parties may then complete a business transaction. Often, these web sites, acting as intermediaries or "infomediaries," facilitate commercial transactions more automatically and in a more targeted fashion than prior systems such as advertising, cold-calling, etc.

[0003] There are many existing web sites that act as intermediaries between buyers and sellers (e.g., sites related to buying and selling automobiles, real estate, electronics, pets, etc.). Thus, finding ways to attract users to a particular site is often an important consideration. In addition, once users are convinced to use a particular site, providing useful information, especially with respect to the products or services being promoted on the site, may be helpful in retaining users and encouraging commerce.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0004] **FIG. 1** is a block diagram illustrating components of a real estate lead generation system using enhanced aerial imaging under one embodiment of the invention.

[0005] **FIG. 2** is a block diagram showing an example of a database scheme that may be used for providing enhanced aerial imaging in the embodiment of **FIG. 1**.

[0006] **FIG. 3** is a block diagram showing an example of a database scheme that may be used for providing lead generation in association with enhanced aerial imaging in the embodiment of **FIG. 1**.

[0007] **FIGS. 4A-4G** are display diagrams showing examples of screenshots at various stages of interaction between a user and an enhanced aerial mapping facility in an embodiment.

[0008] **FIGS. 5A-5C** are display diagrams showing examples of screenshots showing various data overlays as applied to an enhanced aerial mapping facility in an embodiment.

[0009] **FIG. 6** is a display diagram showing an example of a screen where a user can access various overlays and associated features through the use of a tab on a user interface in an embodiment.

[0010] **FIG. 7** is a display diagram showing an example of a screen where a user can access detailed information about selected properties through the use of a tab on the user interface in the embodiment of **FIG. 6**.

[0011] **FIG. 8** is a display diagram showing an example of a screen where a user can access detailed history/tax information about a selected property through the use of a tab on the user interface in the embodiment of **FIG. 6**.

[0012] **FIGS. 9A-9E** are display diagrams showing examples of data charts/reports used in conjunction with the enhanced aerial maps in an embodiment.

[0013] **FIG. 10** is a flow diagram of a representative implementation of a lead generation routine performed by the lead generation server of **FIG. 1** in an embodiment.

[0014] **FIG. 11** illustrates a display for requesting data from a homeowner.

[0015] **FIG. 12** illustrates a comparable market analysis form completed by the real estate professional based on the representative data.

[0016] **FIG. 13** illustrates a home evaluation web page for display to the homeowner based on the comparable market analysis form.

[0017] **FIG. 14A** illustrates a real estate professional's contact management web page that permits a real estate professional to manage homeowner leads.

[0018] **FIG. 14B** illustrates a real estate professional's homeowner prospect profile web page that permits a real estate professional to view and update homeowner leads.

## DETAILED DESCRIPTION

[0019] The invention will now be described with respect to various embodiments. The following description provides specific details for a thorough understanding of, and enabling description for, these embodiments of the invention. However, one skilled in the art will understand that the invention may be practiced without these details. In other instances, well-known structures and functions have not been shown or described in detail to avoid unnecessarily obscuring the description of the embodiments of the invention.

[0020] It is intended that the terminology used in the description presented be interpreted in its broadest reasonable manner, even though it is being used in conjunction with a detailed description of certain specific embodiments of the invention. Certain terms may even be emphasized below; however, any terminology intended to be interpreted in any restricted manner will be overtly and specifically defined as such in this Detailed Description section.

### I. Overview

[0021] A computerized aerial mapping system or facility with possible enhancements provides various map-based features using aerial map information along with other information. In some embodiments, the aerial mapping facility presents a nationwide aerial map to a user using, for example, aerial photographs or satellite imagery and allows a user to "zoom in" on an area or even on a specific property of interest (e.g., a house on Seattle's Lake Wash.).

[0022] The aerial mapping facility may incorporate an overlay of multiple listing service (MLS) data that allows the aerial mapping facility to provide special indications of houses and/or properties that are for sale (e.g., properties for sale may be highlighted on the map using a colored outline around the property). In addition to MLS data overlays, many different types of data overlays may be applied to the aerial map information and this data may be obtained from a variety of data sources. Examples of such information may include county tax parcel location data, tax assessor data, data regarding points of interest, local weather data, average house price, cost-of-living estimates, yellow pages data, etc. In general, the overlay information may include any type of location-based data. The aerial mapping facility may also integrate various type of geographic vector and point data (e.g., shown as drawn-in information in the aerial map) so that streets, boundaries, and other information that are not evident from the aerial picture alone may be identified.

[0023] In some embodiments, users may access the aerial mapping facility from a web site. The web site server may employ a viewer that allows a user to zoom in on a map via a web browser without needing to download a specific client application. Any range of zooming may be implemented. For example, at the highest level, the map may cover an entire country or continent, or even the whole world. It may also be possible to include maps from the aerial mapping facility in emails or other types of user notifications. For example, a user may sign up for a "Just Listed" service that enables him or her to receive emails (containing aerial map features, photos, etc.) each time a home or property goes up for sale in an area of interest that the user has identified. In some cases, the user may be able to set filters to include/exclude certain new listings (e.g., listings outside of the user's price range and/or size requirements). In a similar example, an email update may be sent to a user that includes recent home sales within the user's area, and may include a picture or map. Information regarding open houses in the area may also be provided in this way (with or without a map). In some cases, it may be possible for a user to designate an area of interest by "lassoing" an irregularly shaped area using a graphical interface tool provided by the aerial mapping facility.

[0024] A provider of the aerial mapping facility may generate revenue in multiple ways. In some embodiments, it may be possible to license to various real estate professionals access to aspects of the aerial mapping facility. For example, by performing certain actions from a primary web site provided by the aerial mapping facility, the facility may take the user to a real estate professional's personal home page. In addition, this real estate professional may have registered and paid a fee to receive bundles of leads generated by users zooming in within a designated geographical area. In this way, the aerial mapping facility may be used to collect information from consumers (e.g., home buyers and home sellers) in order to generate leads (e.g., bundles of leads) for real estate professionals or, more generally, providers of goods or services. To enable the collection of leads, users may be taken to a registration page after zooming in on certain features of the map.

[0025] A provider of the aerial mapping facility may also generate revenue by allowing click-through access to an advertiser's own web page via the maps. For example, a user that clicks on a home identified as being for sale on the map may be taken to the selling agent's home page. Likewise, clicking on an indication of a restaurant on the map may take the user directly to the web page for the restaurant. In a similar example, an advertiser may pay a fee for each time its icon is displayed on the map as a point of interest (e.g., advertiser pays two cents each time its fast food icon is displayed on a map as a point of interest).

[0026] In yet another example, revenue may be generated by having real estate professionals license the mapping technology so that they can provide it from their own personal web pages (independent of whether the real estate professional has registered to receive leads generated using the primary mapping web site). For example, in such cases, the provider of the aerial mapping facility may host the real estate professional's web site and thereby provide the mapping technology.

[0027] In some embodiments, the user may be introduced to the aerial mapping facility via a video demo that starts automatically when the user first arrives at a home page associated with the aerial mapping facility. Some of the options provided to users from the home page may include viewing an aerial image of the user's own home (e.g., by entering address information into text fields), searching homes for sale (e.g., by zooming in on desired areas using the interactive map), seeing the prices of recently sold homes, etc. Registration opportunities may exist at various times during a user's interactive session. For example, if the user selects to search for homes for sale, a screen asking the user if he or she wants to register may first pop up.

[0028] In some embodiments, the aerial maps provided by the aerial mapping facility may include color-coded aspects. For example, an age map may show the age of homes using yellow (for newly built homes) fading to red (for older homes), thus using color to show a concentration of new versus older homes in a selected area. In addition to color, other indicators may be used to identify items of interest (e.g., special icons, flashing identifiers, audio identifiers, etc.) For example, flashing may be used to indicate items of interest, such as an open house.

[0029] The mapping technology may be available from a user's personal computer, as well as from other user devices including portable devices (e.g., mobile phones and computers in automobiles).

II. Representative Environment and Sample Data Scheme

[0030] **FIG. 1** and the following discussion provide a brief, general description of a suitable computing environment in which the invention can be implemented. Although not required, embodiments of the invention will be described in the general context of computer-executable instructions, such as routines executed by a general-purpose computer, such as a personal computer. Those skilled in the relevant art will appreciate that the invention can be practiced with other computer system configurations, including Internet appliances, hand-held devices, multiprocessor systems, microprocessor-based or programmable consumer electronics, network PCs, mini computers, mainframe computers, and the like. The invention can be embodied in a special purpose computer or data processor that is specifically programmed, configured, or constructed to perform one or more of the computer-executable instructions explained in detail below. The invention can also be prac-

ticed in distributed computing environments where tasks or modules are performed by remote processing devices, which are linked through a communication network. In a distributed computing environment, program modules or subroutines may be located in both local and remote memory storage devices.

[0031] Unless described otherwise, the construction and operation of the various blocks shown in **FIG. 1** are of conventional design. As a result, such blocks need not be described in further detail herein, as they will be readily understood by those skilled in the relevant art.

[0032] Referring to **FIG. 1**, an enhanced aerial imagery system **100** may include one or more client computers **102**, each of which includes a browser program module **104** that permits the client computer **102** to access and exchange data with the Internet, including web sites within the World Wide Web portion **106** of the Internet (or via another network such as a WAN or LAN, cellular phone network, etc.). The client computers **102** may include one or more central processing units or other logic processing circuitry, memory, input devices (e.g., keyboards and pointing devices), output devices (e.g., display devices and printers), and storage devices (e.g., fixed, floppy, and optical disk drives), all well known but not shown in **FIG. 1**. The client computers **102** may also include other program modules, such as an operating system, one or more application programs (e.g., word processing or spreadsheet applications), and the like.

[0033] An intermediary system or facility **108**, coupled to the World Wide Web, or "Web"**106**, performs much or all of the aerial mapping and lead generation processes. At least one enhanced imagery database **110**, coupled to the intermediary facility **108**, stores data exchanged between the client computers **102** and one or more agent computers **112** under the enhanced aerial imagery system **100**, as described below. Other sources for data used by the enhanced aerial imagery system **110** may also exist, including third-party sources. Each agent computer **112** is similar to the client computers **102**, and includes a browser **114** to permit the agent computer **112** to access and exchange information with the Web **106**.

[0034] In some embodiments, the intermediary facility **108** may include a map view data server **116** for handling the serving of enhanced aerial images and/or a lead generation server **118** for handling lead generation for real estate professionals or other providers of goods or services. In some embodiments, the map view data server **116** handles various functionality, including allowing a user to zoom in and out on an enhanced aerial map without needing to download a specific client. The scope of the high level maps may range from a single property to the whole world. The map view data server may also provide miscellaneous tools, such as a graphical tool that allows a user to select an area of interest by drawing an irregularly shaped area on the map. A rapid access file storage system **132** may function to store image data and associated data when in use by the map view data server **116**.

[0035] The lead generation server **118** may implement its own functionality related to lead generation (e.g., for real estate professionals). For example, the lead generation server **118** may employ an exclusive marker area (EMA) scheme where real estate professionals are exclusively (or semi-exclusively) assigned to areas (e.g., based on zip codes, census block data, or other factors), and then notified of users showing interest in homes in such areas. Information used by the lead generation server **118** may be stored in the user database **120**. In a second example, the lead generation server **118** may access an external multiple listing service (MLS) to generate leads based on user requests that have been obtained through the MLS. These leads may then be bundled and sold in packages to subscribing parties. A combination of the two approaches described above may also be employed, where the lead generation server **118** generates leads through an EMA or similar scheme that are distributed and sold as bundles.

[0036] The intermediary facility **108** may also include a web page manager component **122**, a database manager component **124**, an analysis process component **126**, a notification process component **128**, and a management process component **130**, as well as other components not shown in **FIG. 1**. As described more fully below, the notification process component **128** may facilitate electronic messaging, such as via email, among the client computers **102**, intermediary facility **108**, and agent computers **112**. Alternatively, or additionally, the notification process **128** may provide notification to agents or clients (e.g., real estate professionals and homeowners, respectively) via telecommunications devices. In this way, the notification process may provide updates or other information to users, particularly potential buyers. For example, an email update could include recent sales information for an area, data regarding open houses in the area (with or without a map), open house data, etc. The intermediary system may allow users to specify areas for which they wish to receive such updates.

[0037] Referring to **FIG. 2**, the at least one enhanced imagery database **110** of **FIG. 1** is shown in more detail. In some embodiments, the map view data server **116** may handle many different data sources, although in its simplest form, it may handle only an underlying map layer made up of satellite imagery **202**, aerial photo imagery **204**, and/or the like. These imagery data sources may sometimes be referred to as "Digital Orthorectified Quadrangles" (DOQs). Digital orthography is the process by which images are adjusted to account for elevation changes so that aspects of the image can line up appropriately. For example, the United States Geological Survey (USGS) has been making high-resolution imagery of this type available on a city-by-city basis. Likewise, many private companies provide such imagery.

[0038] In some embodiments, aerial imagery (**202** and **204**) is imported into the intermediary system **108** using one or more tools. For example, one or more tools may break down large image files into many smaller files (e.g., "map tiles") and generate an index file to help locate the many smaller map tiles. The map tiles may go through some additional post-processing prior to use, such as coloring the water or re-coloring the map, or adding additional layers to the tiles. In some embodiments, map tiles need to be image files. Rather they can be any information/data that facilitates the electronic display of one or more maps. A single map displayed on a screen may be comprised of one or many map tiles.

[0039] In some embodiments, map tiles are flattened, two-dimensional images of a round (i.e. three-dimensional) Earth. The mathematical function for transforming a 3-D

surface to a 2-D one is sometimes called a "projection". Aerial images are stored in projections that cover relatively small areas localized to a given city, region, or state. This allows the flattened map tiles to represent the 3-D earth as accurately as possible. Additional point and vector layers (e.g. data overlays) may be added to the map. These layers can be stored in the same mathematical projection as the map itself, but more likely will be stored in either the original 3-D coordinate system (latitude/longitude) or a completely different mathematical projection entirely. In order to accurately overlay these points and vectors on the aerial images, all points are transformed in real-time from their original coordinate space to the map tile projection coordinate space.

[0040] In some embodiments, the one or more tools may generate such map tiles at many resolutions to enable effective zooming in/out. For example, each time a user zooms in on a map, a new set of map tiles (e.g., a three-by-three square of nine map tiles configured at a higher resolution and covering less geography) may replace an earlier set of map tiles (e.g., a three-by-three square of nine map tiles configured at a lower resolution and covering a greater geographical area). To enable quick exchange of map tiles, the one or more tools may request Information about relevant map tiles and the cache such information for later use. For example, while displaying information at one resolution, the one or more tools may anticipate that the user is going to want to zoom in and accordingly, request and cache a next higher resolution of map tiles. Likewise, the one or more tools may request adjacent map tiles and store and cache them in anticipation of a user performing "panning" on a currently displayed map. In this way, the user can experience near seamless panning, zooming, etc., despite the fact that images may themselves comprise large amounts of data.

[0041] Any number of overlays may be added on top of the map layer, with each overlay including additional data of interest. Sometimes, such overlays are purchased from vendors while others are downloaded free from government agencies. In some embodiments, the overlays may comprise information based on vectors, points, or both vectors and points. For example, U.S. city names information **206** may aggregated into a overlay that defines cities using points, which are then drawn as groups of pixels (or icons) on top of the aerial imagery to identify cities and associated information (e.g., state capitals, etc.). In another example, points of interest information **228** or select amenities information **236** may provide similar overlays using points (e.g., identifying restaurants, airports, libraries, museums, amusement parks, shopping centers, grocery stores, etc.). In some cases, the user using filters or searching techniques may access these points of interest.

[0042] Likewise, some overlays may be based on vector information and may provide displays of lines (as in the case of roads) and polygons (parcel outlines, park boundaries, state boundaries, etc.) on top of a map layer. For example, neighborhoods information **208**, boundaries information **210**, roads information **212**, tax information **214**, commercial use information **216**, bodies of water information **218**, parks information **220**, schools information **222**, etc., may all be defined and illustrated using vectors. Additional vector layers may be added when available. For example, a county parcel map (also called a "Base Map") may be distributed by some county agencies and, when accurate, may be an appropriate overlay on aerial imagery. Like the points described above, these vector- based overlays may also be accessed by searching techniques (e.g., using keywords) or by filtering techniques, etc.

[0043] While specific types of layering/overlay schemes based on specific types of information are described above, almost any type of data that has any geographic relevance can also be tied to the maps of the aerial mapping facility. Such data may include county tax assessor records **214**, real estate information related to current listings **224**, topography information **226**, real estate information related to past listings (previously sold) **230**, information related to the age of various buildings or structures **232**, real estate information related to open houses **234**, information related to garage sales **238**, census bureau and state traffic analysis (not shown), neighborhood and community statistics (not shown), geologic data, zoning data, construction or other permit data, etc. In some embodiments, the information used for overlays may be associated with more detailed information that may be presented when a user clicks on an object identified on a map. Likewise, it may be possible for the user to click to add or remove different layers of data. Each layer may be represented by a different color or other attribute (vector characteristic, etc.).

[0044] With respect to implementation of such overlays, in some embodiments, point and vector overlays can be delivered as database tables or flat files (e.g., ESRI shapefiles). Shapefile is the most common flat file format supported by nearly all Geographic Information System (GIS) data suppliers. In some embodiments, shapefiles are run through a tool associated with the intermediary facility **108** and imported into the database to allow faster lookup of the data when performing rendering. To help with the matching up of map images to overlay information, the overlay information, which may be implemented using points and/or vectors, may be structured using a geographical coordinate system similar to the geographical coordinate system used in GIS maps. In this way, mathematical projections can be used to match overlays with maps, so that the overlay information lines up with the map information as accurately as possible. For example, in some embodiments, point coordinates may be stored in a particular mathematical projection inside a file containing map or overlay information. Various aerial imagery coordinates may also be stored using mathematical projections, but such projections may not be the same as the projection for each point/vector layer. Because each point/vector layer consists of individual points and or vectors, those points/vectors can be "re-projected" to line up on the aerial imagery.

[0045] Alternatively, in addition to the data scheme described above, the aerial image maps can be integrated with data from other data sources, such as third party data sources. Accordingly, there are few limits on what types of information can be shown on such maps. Some examples include source specific information about points of interest, weather information, sports information, news information, current cost of living information, store hours information, and so forth.

[0046] Referring to **FIG. 3**, the various users of the system may be assigned records in a user database **120** to facilitate lead generation or similar functionality. For example, each

real estate professional (or other seller or provider of goods or services) may be assigned a user database record **340**. Each record may include an agent ID field **342**, an agent name field **344**, an assigned zip code(s) field **346**, an email address field **348**, a phone number field **349**, a company or employer field **350**, an address field **352**, a payment field **354**, a contacts field **356**, a contacts status field **358**, and a contacts calendar field **360**. Of course, each record can include some or all of these fields, or additional fields not shown in **FIG. 3**. In one embodiment, only one real estate professional is assigned to each zip code, although in alternative embodiments, more than one agent can be assigned to a single zip code.

[**0047**] In addition to records for agents/professionals, the user database may also include records for future purchasers of goods or consumers of a service (e.g., home buyers or sellers). For example, each record may include a user ID field **362**, a user name field **364**, an email address field **366**, a phone number field **368**, an address field **370**, and one or more fields providing information on an item or service associated with the user **372** (e.g., identifying information about a home the user wishes to purchase or sell).

III. Sample User Interfaces

[**0048**] **FIGS. 4A-4G**, **5**A-**5**C, **6-7**, **8**, and **9**A-**9**E are display diagrams showing examples of various user interface features, screens, and/or web pages associated with embodiments of the aerial mapping facility. The screens or web pages of the Figures may be implemented in C++, Java, or JavaScript, or as web pages under XML (Extensible Markup Language), HTML (Hypertext Markup Language), Flash! ASP.net, or any other scripts or methods of creating displayable data, such as the Wireless Access Protocol ("WAP"). The screens or web pages provide facilities to receive input data, such as a form with fields to be filled in, pull-down menus or entries allowing one or more of several options to be selected, buttons, sliders, hypertext links or other known user interface tools for receiving user input. While certain ways of displaying information to users is shown and described with respect to certain Figures, those skilled in the relevant art will recognize that various other alternatives may be employed. The terms "screen,""web page" and "page" are generally used interchangeably herein.

[**0049**] When implemented as web pages, the screens are stored as display descriptions, graphical user interfaces, or other methods of depicting information on a computer screen (e.g., commands, links, fonts, colors, layout, sizes and relative positions, and the like). In general, a "link" refers to any resource locator identifying a resource on a network, such as a display description provided by an organization having a site or node on the network. A "display description," as generally used herein, refers to any method of automatically displaying information on a computer screen in any of the above-noted formats, as well as other formats, such as email or character/code-based formats, algorithm-based formats (e.g., vector generated), or matrix or bit-mapped formats. While aspects of the invention are described herein using a networked environment, some or all features may be implemented within a single computer environment.

[**0050**] **FIG. 4A** is an example of a screenshot of a home page **400**. The home page **400** of **FIG. 4A** may represent a portal by which a user enters the aerial mapping facility. For example, it may be utilized to facilitate real estate sales, generate leads for real estate professionals, facilitate entry to agent web sites, and so forth. In addition, the portal can be tailored to provide different aspects to consumers than the aspects provided to real estate professionals. The home page **400** shows a high-level aerial image of an interactive map **402** covering the United States and parts of North America. The user may be provided with various options for interacting with the map **402**, including zooming in on aspects of the map using zoom features **404**, which may include a click-sensitive map that the user can click on to drill down. For example, a user may be able to click anywhere on the U.S. map to zoom down to an individual home, as shown in a screenshot **420** of **FIG. 4B**. It may also be possible to reset the map using the zoom features **404** or other features (e.g., shortcut keys).

[**0051**] Additional user interface features may include a SEE AN AERIAL VIEW OF MY HOME feature **406**, a SEARCH HOMES FOR SALE feature **408**, and a SEE RECENT HOME SALES ON MY STREET feature **410**. To provide this information, the map **402** may include an overlay of multiple listing service (MLS) data to display indications of houses that are for sale in an area displayed on the map. Because of the high-level nature of the map **402**, as can be expected, the overlay of MLS data is not shown in **FIG. 4A**, but is shown in subsequent Figures (e.g., **FIG. 4D**). In this way, the enhanced aerial imagery may generate leads for sales, such as home sales.

[**0052**] A layering tool bar **412** depicted here at the bottom of the map **402** allows a user to select various informational layers that can be applied to the map. Other options for allowing users to select layers may include expandable menus or other UI features. For example, applying a STREETS layer using the layering tool bar **412** will allow users to view street location, names, and numbers when the map is zoomed in to an appropriate level of detail. Similarly, applying a SCHOOLS & PARKS layer using the layer tool bar **412** will display identifiers associated with schools and parks when the map is zoomed in to the appropriate level of detail. An AGENTS layer, if selected, will allow the user to see an indication of any real estate professionals assigned to a particular region. For example, real estate professionals may sign up with and pay a fee to the provider of the aerial mapping facility to be associated with a specific area of the map. A POINTS OF INTEREST layer may also be provided (to display points of interest, e.g., restaurants, shopping centers, airports, etc.) within a given area. Accordingly, the enhanced aerial imagery scheme can be used to generate revenue by promoting particular points of interest (e.g., a two-cent royalty may be collected each time an icon identifying a McDonald's restaurant is displayed on the map). A FACTS layer may allow a user to view more detailed facts (when available) about a particular point or vector on the map. It is not difficult to see that the information associated with the layers described above may be useful to future home buyers, sellers, and real estate professionals, as well as other users.

[**0053**] Referring to **FIG. 4C**, a screenshot **430** shows a result of the user selecting or clicking on the SEE AN AERIAL VIEW OF MY HOME feature **406**. As shown, an ADDRESS text box **432** and a ZIP CODE text box **434** are displayed, into which the user enters his or her address "8301 Overlake Drive" and zip code "98039," respectively.

The user may then submit the information by selecting a GO button **436**. As a result of selecting the GO button **436**, the user is taken to a page that shows the user's home identified in an enhanced aerial map. An example of such a page is shown in **FIG. 4D**.

[**0054**] **FIG. 4D** shows a screenshot **440** of a map **442** after the user has selected to zoom in on his or her own home at "8301 Overlake Drive." An indication of the user's home **444** is highlighted using a yellow outline (e.g., vector layer). The user may be instructed to click on the identified area to zoom in. In addition to the user's own home, various properties are highlighted using a different color outline, and may indicate homes for sale **446** in the area surrounding the user's own home. This information may be provided based, for example, on an overlay of MLS data, or on other information. The user is also instructed to "Click any property to see more." In addition, various parks **448** are identified on the map, as the SCHOOLS & PARKS layer is selected in the layering tool bar.

[**0055**] **FIG. 4E** shows an example of a screenshot **450** of a registration view **452** from which a user may provide registration information. This information may later be used to generate leads for real estate professionals, or for sending notifications to the user. In some embodiments, the registration view **452** may be displayed after the user performs some activity associated with an enhanced aerial map, such as selecting to invoke a SEARCH HOMES FOR SALE feature **408**, as shown in **FIG. 4A**, or clicking on a property on a map that is highlighted as being for sale (e.g., home **446** in **FIG. 4D**). In some embodiments, the registration is optional, or alternatively required if the user would like to receive further information. The registration view **452** may include an explanation **454** of reasons why a user should register. It may also include a login area **456** for users that have previously registered as well as input fields **458** allowing new users to register. One or more checkboxes may be provided that allow users to elect certain services or features associated with the aerial mapping facility. For example, users may be able to select SHOW ME CURRENT MLS LISTINGS **460**, SHOW ME RECENT SALES IN MY AREA **462**, and/or SEND ME PINPOINT UPDATES **464**. When a user completes registration or login, the user may then select a GO button **466** to submit the information.

[**0056**] **FIG. 4F** is a screenshot **470** showing an agent-specific screen **472** that may be displayed to the user after he or she selects the GO button from the registration view **452** of **FIG. 4E**. The agent-specific screen **472** may include an agent banner **474** that identifies the real estate professional(s). The agent-specific screen **472** may also display a property summary **476** that provides detailed information for the initial property that the user selected to be brought to the agent-specific screen **472**. In some embodiments the user may select from various tabs **478** and/or subtabs **480** provided on the agent-specific screen **472**. Examples of such tabs **478** include a HOME tab, a SEARCH FOR PROPERTIES tab, a VIEW RECENT HOME SALES tab, a RESOURCES tab, an ABOUT US tab, etc. Many of these tabs are self-explanatory. In the illustrated example, a SEARCH FOR PROPERTIES tab is selected, and results in the display of various subtabs **480** including a BASIC SEARCH subtab, an ADVANCED SEARCH subtab, a PROPERTY RESULTS subtab (currently selected), a PROPERTY DETAILS subtab, a MY FAVORITES subtab, a MY SAVED SEARCHES subtab, etc. As with the tabs **478**, the subtabs **480** shown in the illustrated example are self-explanatory. The property results subtab is shown in more detail, and provides various listings **482** within a given area, as well as an interactive map **484** and related features.

[**0057**] **FIG. 4G** is a screenshot **490** showing a property details screen or view **492** associated with a property details subtab on the agent-specific screen **472** (also displayed in **FIG. 4F**). In the illustrated example the property details view **492** shows a property summary **494** and provides access to various images of the selected property via thumbnails **496** and a general image **498**. Other examples of information that can be shown in the property details view **492** include a virtual tour (e.g., panning images showing different views of a room in a house), video, etc.

[**0058**] While not shown in the Figures, other interactive map options may be provided. For example, some enhanced aerial maps may provide access to "coupons" associated with businesses. Such coupons may be presented (e.g., via a web site or pop-up) when a user clicks an indication of specially marked businesses (e.g., highlighted in yellow or some other color on the aerial map). Revenue can be generated accordingly (e.g., for just posting the coupon, for each impression, for each click-through, for a percentage of each sale, etc.).

[**0059**] **FIGS. 5A-5C** and **6-8** are display diagrams showing examples of data overlay schemes (e.g., layers) that may be applied by the aerial mapping facility. This data can include any type of location-based data, such as real estate data, points of interest (commercial establishments), and so forth. For example, **FIG. 5A** shows a home age overlay "heat map" where the aerial map is displayed showing various colors assigned based on the age of homes. For example, dark red may indicate older homes (early 1900s), orange may indicate homes from the 1950s and 1960s, and yellow may indicate newer construction. Other interesting categories could also be mapped (e.g., appreciation, taxes, sales price, etc.). In this way it is easy for users to locate concentrations of homes based on age, appreciation, etc. Likewise, **FIG. 5B** shows an overlay of parks and water, while **FIG. 5C** shows an overlay of homes for sale, parks, schools, and water, all in combination. By providing features such as these, the aerial mapping facility may allow future homeowners to become more familiar with important factors within the areas in which they are looking to buy. In turn, this will attract more users (and return users) to the web site, and thereby generate more leads, advertising opportunities, etc.

[**0060**] **FIGS. 6-8** show various examples of one embodiment of the aerial mapping facility where users can access various overlays and associated features through the use of tabs on a user interface. Referring to **FIG. 6**, examples of such tabs include a VIEW tab **602**, a SEARCH tab **604**, a DETAILS tab **606**, a HISTORY/TAXES tab **608**, and an ADVANCED tab **610**. As shown in **FIG. 6**, the VIEW tab **602** may include an OVERLAYS section **612**, which allows users to select various overlays (e.g., parks, schools, neighborhoods, etc.) to apply to an interactive aerial map **614**. Each selected overlay may then be associated with a particular color on the map. The OVERLAYS section **612** may also provide access to a customizable overlay via a search field **616**, where the user may enter in keywords to identify

points of interest (e.g., grocery stores) so that locations associated with such search results may be displayed on the interactive aerial map **614**. A FOR SALE section **618** may provide input fields so that a user can filter out homes for sale in the area that meet specified requirements (e.g., price range, residential versus condominium, number of bedrooms, etc.). Likewise, a COMPS **620** section may allow a user to input information so that the user can see what other comparable homes have sold for in the recent past.

[**0061**] **FIG. 7** shows an example of information provided under the DETAILS tab **606**. For example, the DETAILS tab **606** may provide a photograph **702** of a selected home (identified using a unique color outline on a map **704**), as well as a detailed description **706** of the home. Using a forward/backward feature **708**, it may be possible to scroll to detailed information about another home displayed on the map.

[**0062**] **FIG. 8** shows an example of information provided under the HISTORY/TAXES tab **608**. For example, **FIG. 8** shows basic tax information **802** for a selected residence, as well as a map **804** with tax plats shown in red outlines. In addition to basic tax information, the aerial mapping facility may provide tax information for recent sales of the selected home **806**, as well as a feature **808** that allows users to find comparable properties in the area (e.g., comparable with respect to tax information).

[**0063**] **FIGS. 9A-9E** provide examples of data charts/reports used in conjunction with the enhanced aerial maps. For example, these reports may provide statistical information as well as data comparisons among selected neighborhoods, areas, groups of homes, etc. **FIG. 9A** is an example of a report that provides information on average appreciation of homes in a given set of areas versus the year built. **FIG. 9B** is an example of a report that identifies the percentage by which the median sales price has changed for Seattle neighborhoods over a **20**-year period. **FIG. 9C** is an example of a report that shows how waterfront home values in a given area fluctuate more greatly than non-waterfront homes in the same area. **FIG. 9D** is an example of a report that shows a change of median sale price for selected neighborhoods over time. **FIG. 9E** is an example of a report that shows trends in King County home sales volume over 20 years.

IV. Lead Generation Examples

[**0064**] **FIG. 10** is a flow diagram of a representative implementation of a lead generation routine **1000**, possibly used in combination with the enhanced aerial imaging techniques described above. Beginning at block **1002**, the routine **1000** (e.g., via the lead generation server **118** of **FIG. 1**) identifies real estate professionals and assigns them to particular zip codes or other designations in the appropriate database (e.g., the user database **120** of **FIGS. 1 and 3**). For example, each real estate professional may be assigned a database record, as described in more detail with respect to **FIG. 3**. At block **1004**, the routine **1000** presents lead generation opportunities to homeowners, potential home buyers, or other members of the public. An example of such lead generation opportunities includes the aerial maps described above. Additional lead generation opportunities may result from posting banner advertisements on selected web pages or sending targeted email messages or other direct advertisements to the client computers **102**. The costs for the advertisements may be billed based on the number of homeowner visits to the web site, or the number of homeowners who visit the web site and actually complete a web page form, or by other methods, including methods described above relating to aerial maps.

[**0065**] At block **1006**, the routine **1000** receives a home valuation request form or home inquiry request form from a homeowner. For example, in the illustrated embodiment of **FIG. 1**, the client computer **102**, via the browser **104**, may retrieve a display description, e.g., a web page information request form from the web page manager component **122** of the intermediary facility **108**. An example of such a request form is shown with respect to **FIG. 11** (and also with respect to **FIG. 4E**), and may be displayed after a user selects a home using an enhanced aerial imagery map. A request form **1100** includes fields to be filled in by the homeowner (or future home buyer), some of which include drop-down entries or buttons to permit the user to select one of several options. As shown, the request form **1100** may include contact information **1102** for the homeowner (or future home buyer) (e.g., property's address; property's zip code; neighborhood name; homeowner's/buyer's name; homeowner's/buyer's address, including city, state, and zip code; home phone; work phone; email address, etc.) and property information **1104** (e.g., type of property; style of home; approximate year built; number of bedrooms; number of full bathrooms; number of half bathrooms; number of fireplaces; square footage; parking spaces; list of recent improvements; primary/rental home; rating of overall condition; when the homeowner plans to sell; where the homeowner is moving; whether the home is currently listed with an agent; how the homeowner heard about the existence of the web site listing this form; whether the homeowner would like to receive a newsletter, etc.). After the homeowner/future home buyer has filled out the fields in the request form **1100**, the homeowner selects a submit query button **1106** to send the completed form from the client computer **102** to the intermediary facility **108**, via the Web **106**.

[**0066**] While not shown, the request form **1100** may also include other features such as a mortgage calculator, a moving calculator, an insurance professor, a library, a relocation wizard, etc. For example, the mortgage calculator determines home buying power from the point of view of a lender by analyzing a broad spectrum of financial and mortgage scenarios. The moving calculator estimates high and low estimates of moving costs for local and long-distance relocations. The insurance professor compares insurance rates in a number of cities for a variety of insurance carriers. The library includes various articles or other data relevant to a homeowner who is interested in selling a home. The relocation wizard provides a personalized and detailed relocation time line that helps homeowners get and stay organized before and during a move. Other features (not shown) may include a home seller tips section, which provides tips on helping a homeowner sell a home. These and other features are known to those skilled in the relevant art and need not be described in further detail herein.

[**0067**] At block **1006**, the routine **1000** adds the data in the received request form **1100** to the appropriate database (e.g., the user database **120** of **FIGS. 1 and 3**). At block **1008**, the routine **1000** identifies a selected agent in the appropriate database. For example, with respect to the components of **FIG. 1**, the database manager component **124**, together with

the lead generation server **118**, queries the user database **120** for the record having an assigned zip code field with a zip code that matches a zip code field in the received request form **1100**. Other mappings (besides zip code mappings) may be possible.

[**0068**] At block **1008**, the routine **1000** provides a reply to the homeowner/future home buyer who submitted the request form **1100**. For example, with respect to the components of **FIG. 1**, the notification process **128** may send a thank you email message to a homeowner based on the email field in the request form **1100**. The email message may acknowledge receipt of the request form **1100** and thank the homeowner for submitting such a request, as well as provide additional information such as when he or she may expect to receive a response.

[**0069**] At block **1010**, the routine **1000** forwards the request form **1100** to the identified agent and notifies the identified agent. For example, with respect to the components of **FIG. 1**, the notification process **128** of the intermediary facility **108** may automatically create an email message or other notification for the agent computer **112** of the identified agent, and send such message over the Web **106**. In some embodiments, the notification process **128** provides not only email notification to the identified real estate professional, but also notification messages via wireless communication devices. For example, under such an embodiment, the notification process **128** provides a notification message to a telecommunications interface. The telecommunications interface, in turn, provides a notification message to a cellular phone (e.g., in the form of a prerecorded audio message), or to a pager (e.g., in the form of an alphanumeric text message). The prerecorded audio message and/or alphanumeric text message inform the identified real estate professional that he or she has a pending request from a homeowner for a comparable market analysis ("CMA").

[**0070**] At block **1012** (which applies primarily to the case where a home seller has submitted a request), the routine **1000** receives valuation data from the real estate professional who has completed a comparable market analysis to estimate a selling price for the home identified in the form. For example, this comparable market analysis may be based on local knowledge, data from the homeowner's completed request form **1100**, and data collected from multiple listing services. **FIG. 12** shows an example of a comparable market analysis form **1200**. The various fields of the comparable market analysis form **1200** are generally self-explanatory. For example, header fields **1202** include the assigned real estate professional's name, homeowner's name, submission date and address, which in **FIG. 12** are "Jon Washburn, ""Mark Powers,""Jan. 1, 2000," and "2011 182nd Avenue N.E., Redmond, Wash. 98052," respectively. An introduction field **1204** may allow the real estate professional to personalize an introductory message to be included in a home evaluation web page that the system makes available to the homeowner (as described below). Recent comparable sales fields **1206** provide four rows of input fields for the real estate professional to list up to four comparable recently sold homes. Data to be completed in the fields include address, square footage, bedrooms, bathrooms, year built, sold price, and comments. Estimated selling price fields **1208** provide low and high estimated selling price fields for the real estate professional to fill in based on the recent comparable sales fields **1206**. A comments field **1210** may allow the real estate professional to add some additional comments regarding the estimated selling price. A closing comments field **1212** may allow the real estate professional to provide some additional information regarding the selling prices and home sales and provide personalized closing text for the home evaluation web page noted below. The comparable market analysis form **1200** also includes four buttons. An update button **1214** may allow the real estate professional, after clicking the button, to update the homeowner's profile (described below). A help button **1216** may allow the real estate professional to access help instructions stored in the appropriate database or otherwise contact technical support. A preview CMA button **1218** may allow the real estate professional to view a preview of the home evaluation web page, while a send CMA button **1220** sends the completed market analysis form **1200**. After completing the form **1200**, the identified real estate professional clicks the send CMA button **1220**, at which time the real estate professional computer, such as the agent computer **112** of **FIG. 1**, transmits the completed market analysis form **1200** to the intermediary facility **108** to be stored in the database **120**.

[**0071**] At block **1014**, the routine **1000** stores the received market analysis form **1200** in the appropriate database and creates a home evaluation web page for the homeowner based on the received (and stored) market analysis form **1200**. An example of a home evaluation web page **1300** is shown in **FIG. 13**. Again, the home evaluation web page **1300** is generally self-explanatory. A central section **1302** may include most of the information that the real estate professional input to the comparable market analysis form **1200** (e.g., homeowner's name and address from the header fields **1202**, text from the introduction field **1204**, the recent comparable sales fields **1206**, estimated selling price fields **1208**, comments field **1210**, and closing comments field **1212**). The central section **1302** may also include all of the comparable market analysis data requested by the homeowner, and may provide this data in a personalized manner to the homeowner as if from the real estate professional directly. The home evaluation web page **1300** may also include a frame section **1304** that provides a profile and introduction of the identified real estate professional. The frame section **1304** includes a bitmapped image portion **1306** displaying an image of the real estate professional, together with several links to the real estate professional's web site. A biography or information link **1308** may allow a homeowner to link from the home evaluation web page **1300** to a web page describing the real estate professional's marketing services, current house listings, and other information about the real estate professional. An email link **1310** may allow a homeowner to quickly and efficiently send the real estate professional an email. A web site link **1312** may allow a homeowner to access the real estate professional's customized web site. The frame section **1304** also includes one or more banner advertisements **1314** that display advertisements to further generate revenue for the intermediary facility operator.

[**0072**] At block **1016**, the routine **1000** provides an email message or other notification to the homeowner identifying, and providing a link to, the created home evaluation web page. For example, with reference to the components of **FIG. 1**, the notification process **128** may send a notification email message to the homeowner in a manner similar to the

email notification described at block **1008**. The email notification includes a URL link to the created home evaluation web page.

[**0073**] After the routine **1000** ends, other activities may take place. For example, with respect to the component of **FIG. 1**, the intermediary facility **108** and database manager component **124** of **FIG. 1** may update the identified real estate professional's contact management data in the database **120**. An example of a contact management web page **1400** is shown in **FIG. 14A**. Again, the contact management web page **1400** is generally self-explanatory. Header fields **1402** include the real estate professional's name, company, address, phone number, email address, and designation of a second real estate professional, if applicable. A pending CMA request section **1404** includes one or more rows of pending CMA requests, with each row including a last name, address, zip code, and two buttons or links **1403** and **1405** to permit the real estate professional to review a pending CMA request and to prepare a CMA, respectively. A pending listing prospects section **1406** includes lists of leads or prospects for which a CMA (home evaluation web page) has been completed. Each row contains many of the same fields as that for the pending CMA request section **1404**, except that a link is not provided to prepare a CMA (because one has already been prepared) but does include a "Contact Now" field to notify the real estate professional that a pending lead should be contacted.

[**0074**] Referring to **FIG. 14B**, the profile web page **1450** may include detailed information with respect to each lead in the real estate professional's contact management system. As shown in **FIG. 14B**, a header section **1452** may include much of the data from fields in a completed web page form. An update homeowner data button **1456** may allow the real estate professional, when clicking thereon, to update the information in the header section **1452**. An email prospect button **1458** may allow the real estate professional to quickly and efficiently send an email to the lead whose profile web page **1450** is currently open. A call button **1460** and schedule an activity button **1462** allow the real estate professional to automatically schedule a reminder for a telephone call or follow-up activity, respectively, with the lead whose profile web page **1450** is currently open. A pending activity field **1464** lists a call or activity scheduled by the button **1460** or **1462**. A comments field **1466** may allow the real estate professional to input comments based on a call or activity with a lead, while a save button **1468** may allow the real estate professional to save such comments. A previous notes field **1470** displays comments previously saved by the real estate professional. A view CMA button **1472** causes the web page manager component **122** to display a home evaluation web page for the current lead, while a delete button **1474** may allow the real estate professional to delete the profile web page **1450** for the current lead.

[**0075**] In the illustrated embodiment, the contact management web page **1400** and profile web page **1450** may permit the identified real estate professional to identify all pending leads or contacts (homeowners who have submitted a completed request form); data on past contacts/homeowners; agent notes covering conversations or other transactions with contacts, sellers, or homeowners; calendar scheduling information to plan future contacts; and assign an outcome to each lead such as listed and sold, listed with another real estate professional, sold for sale by owner, not planning to sell, etc., and then allow the deletion of a lead.

V. Conclusion

[**0076**] One skilled in the relevant art will appreciate that the concepts of the invention can be used in various environments other than described in detail herein. In general, a display description may be in HTML, XML or WAP format, Flash, email format, or any other format suitable for displaying information (including character/code-based formats, algorithm-based formats (e.g., vector generated), and bitmapped formats). Also, various communication channels, such as local area networks, wide area networks, or point-to-point dial-up connections, may be used instead of the Internet. The system may be conducted within a single computer environment, rather than a client/server environment. Also, the user computers may comprise any combination of hardware or software that interacts with the server computer, such as television-based systems, Internet appliances, and various other consumer products through which data retrieval and display may be conducted, such as wireless computers (palm-based, wearable, mobile phones, etc.). The various aspects of the invention described herein can be implemented in or for any email environment.

[**0077**] Unless the context clearly requires otherwise, throughout the description and the claims, the words "comprise,""comprising," and the like are to be construed in an inclusive sense, as opposed to an exclusive or exhaustive sense; that is to say, in the sense of "including, but not limited to." The word "coupled," as generally used herein, refers to two or more elements that may be either directly connected or connected by way of one or more intermediate elements. Additionally, the words "herein,""above,""below," and words of similar import, when used in this application, shall refer to this application as a whole and not to any particular portions of this application. Where the context permits, words in the above Detailed Description using the singular or plural number may also include the plural or singular number, respectively. The word "or" in reference to a list of two or more items covers all of the following interpretations of the word: any of the items in the list, all of the items in the list, and any combination of the items in the list.

[**0078**] The above detailed description of embodiments of the invention is not intended to be exhaustive or to limit the invention to the precise form disclosed above. While specific embodiments of, and examples for, the invention are described above for illustrative purposes, various equivalent modifications are possible within the scope of the invention, as those skilled in the relevant art will recognize. For example, while processes or blocks are presented in a given order, alternative embodiments may perform routines having steps, or employ systems having blocks, in a different order, and some processes or blocks may be deleted, moved, added, subdivided, combined, and/or modified. Each of these processes or blocks may be implemented in a variety of different ways. Also, while processes or blocks are at times shown as being performed in series, these processes or blocks may instead be performed in parallel, or may be performed at different times.

[**0079**] Aspects of the invention may be stored or distributed on computer-readable media, including magnetically or optically readable computer disks, hard-wired or prepro-

grammed chips (e.g., EEPROM semiconductor chips), nanotechnology memory, biological memory, or other data storage media. Indeed, computer-implemented instructions, data structures, screen displays, and other data under aspects of the invention may be distributed over the Internet or over other networks (including wireless networks), on a propagated signal on a propagation medium (e.g., an electromagnetic wave(s), a sound wave, etc.) over a period of time, or they may be provided on any analog or digital network (packet switched, circuit switched, or other scheme). Those skilled in the relevant art will recognize that portions of the invention reside on a server computer, while corresponding portions reside on a client computer such as a mobile or portable device, and thus, while certain hardware platforms are described herein, aspects of the invention are equally applicable to nodes on a network.

[0080] The teachings of the invention provided herein can be applied to other systems, not necessarily the system described herein. The elements and acts of the various embodiments described above can be combined to provide further embodiments. Any patents, applications, or other references noted herein, including any that may be listed in accompanying filing papers, are incorporated herein by reference. This includes U.S. patent application Ser. No. _____, filed Aug. 19, 2005, entitled "Enhanced Imagery, such as for Lead Generation for Service Providers Who Provide Services Associated with Real Estate" (attorney docket no. 322808002US2); U.S. patent application Ser. No. _____, filed Aug. 19, 2005, entitled "Server-Based Interactive Enhanced Map Imagery Engine" (attorney docket no. 322808004US); U.S. patent application Ser. No. _____, filed Aug. 19, 2005, entitled "Notifications Using Enhanced Map-Based Imagery" (attorney docket no. 322808005US); U.S. patent application Ser. No. _____, filed Aug. 19, 2005, entitled "Enhanced Map Imagery, such as for Location-Based Advertising and Location-Based Reporting" (attorney docket no. 322808006US); and U.S. patent application Ser. No. _____, filed Aug. 19, 2005, entitled "Enhanced Maps, such as for Lead Generation" (attorney docket no. 322808007US), all herein incorporated by reference.

[0081] Aspects of the invention can be modified, if necessary, to employ the systems, functions, and concepts of the various references described above to provide yet further embodiments of the invention.

[0082] These and other changes can be made to the invention in light of the above Detailed Description. While the above description details certain embodiments of the invention and describes the best mode contemplated, no matter how detailed the above appears in text, the invention can be practiced in many ways. Details may vary considerably in its implementation details, while still being encompassed by the invention disclosed herein. As noted above, particular terminology used when describing certain features or aspects of the invention should not be taken to imply that the terminology is being redefined herein to be restricted to any specific characteristics, features, or aspects of the invention with which that terminology is associated. In general, the terms used in the following claims should not be construed to limit the invention to the specific embodiments disclosed in the specification, unless the above Detailed Description section explicitly defines such terms. Accordingly, the actual scope of the invention encompasses not only the disclosed embodiments, but also all equivalent ways of practicing or implementing the invention.

[0083] One skilled in the art will appreciate that the concepts of the present invention can be used in various environments other than the Internet. For example, the concepts can be used in an electronic mail environment in which electronic mail forms and messages perform the lead generation processes. Also, while the one intermediary facility **108** is shown, any server system may be used, including any combination of hardware or software that can support the concepts and aspects of the invention disclosed herein. In particular, a web server may be used that includes multiple computers. A client computer or system may comprise any combination of hardware or software that interacts with the server computer or system. These client systems may include television-based systems and various other consumer products through which commercial or noncommercial transactions can be conducted.

[0084] The above description of illustrated embodiments of the invention is not intended to be exhaustive or to limit the invention to the precise form disclosed. While specific embodiments of, and examples for, the invention are described herein for illustrative purposes, various equivalent modifications are possible within the scope of the invention, as those skilled in the relevant art will recognize. The teachings of the invention provided herein can be applied to other electronic commerce systems, not necessarily the real estate lead generation system described above. Indeed, the invention applies to agents or service providers in other fields, not necessarily real estate professionals, and to property owners, not necessarily homeowners. Further, the various embodiments described above can be combined to provide further embodiments.

[0085] These and other changes can be made to the invention in light of the above detailed description. In general, in the following claims, the terms used should not be construed to limit the invention to the specific embodiments disclosed in the specification and the claims, but should be construed to include all machine vision systems that operate under the claims to provide a method for accurately locating visual indicia. Accordingly, the invention is not limited by the disclosure, but instead the scope of the invention is to be determined entirely by the following claims.

I/We claim:

**1**. A method in a computer system for providing location-specific information, comprising:

receiving a request for map image data associated with satellite images, aerial photographs, or rasterized maps, or any combination of satellite images, aerial photographs, and rasterized maps;

receiving a request for map overlay data, wherein the map overlay data is configurable for display in association with one or more maps generated using the map image data;

providing a display description associated with the requested map image data as a collection of map tiles, wherein the collection of map tiles is configurable to provide a map with capabilities that allow a user to continuously zoom in on and out of selected areas of the map; and

providing overlay information associated with displaying the requested map overlay data in association with the requested map image data.

**2**. The method of claim 1 wherein at least some of the tiles in the collection of map tiles are configured to form a map of the continental United States.

**3**. The method of claim 1 wherein at least some of the tiles in the collection of map tiles are configured to form a detailed map that is set at a resolution of less than approximately one meter per pixel.

**4**. The method of claim 1 wherein the capabilities that allow a user to zoom in on and out of selected areas of the map include capabilities that allow the user to zoom in from a national level map to a detailed map level that is set at a resolution of less than approximately one meter per pixel.

**5**. The method of claim 1 wherein the provided display description and the provided overlay information are provided via a remote server, and do not require downloading an application specific to providing the location-specific information.

**6**. The method of claim 1, further comprising:

providing a graphical user interface functionality allowing a user of the displayed map to lasso or otherwise select irregularly shaped areas on the map.

**7**. The method of claim 1 wherein the applied displayable map overlay includes color coding of features.

**8**. The method of claim 1 wherein the applied displayable map overlay provides an indication of features of interest using descriptive graphics.

**9**. The method of claim 1 wherein the applied displayable map overlay provides an indication of features of interest using flashing graphics.

**10**. The method of claim 1 wherein the applied displayable map overlay provides an indication of features using audible identifiers.

**11**. The method of claim 1, further comprising:

providing overlay selection functionality configured for allowing a user to specify information relating to one or more map overlays to be applied to the requested information.

**12**. The method of claim 1, further comprising:

providing textual and/or graphical information for display in a window or frame adjacent to the map, wherein the textual and/or graphical information is associated with features of the map or features of the overlay data.

**13**. The method of claim 1 wherein the multiple map tiles are enhanced via post-processing prior to display, wherein the post-processing includes processing activities from a set of processing activities including:

reprojection of the map image data;

beautification of the map image data; and

altering of the map image data to increase aesthetic appeal.

**14**. A computer-readable medium containing a data structure comprising:

map image data including data associated with satellite images, aerial photographs, rasterized maps, or any combination of satellite images, aerial photographs, and rasterized maps, wherein the map image data is configurable as map tiles to provide at least one displayable interactive map having capabilities that allow a user to zoom in on and out of selected areas of the interactive map, and wherein the map image data is represented in a first mathematical projection; and

map overlay data, wherein the map overlay data includes data configured for dynamic display in association with the displayed interactive map, and wherein the map overlay data is stored in a second mathematical projection and then reprojected in the first mathematical projection for display.

**15**. The computer-readable medium of claim 14 wherein the map overlay data is configured for dynamic display in association with the interactive aerial map in point form, in vector form, or in a combination of both point and vector form.

**16**. The computer-readable medium of claim 14 wherein the map overlay data is configured for dynamic display in multiple device types, including portable or mobile devices.

**17**. The computer-readable medium of claim 14 wherein the map overlay data is configured for allowing a user to access more detailed information about an item of interest by clicking on a graphic or feature displayed in association with the map overlay.

**18**. A system for providing location-specific information, comprising:

means for receiving a request for image data associated with satellite images, aerial photographs, rasterized maps, or any combination of satellite images, aerial photographs, and rasterized maps;

means for providing a display description containing the requested information to a client computer, wherein the display description includes a collection of one or more map tiles, wherein the collection of one or more map tiles is configurable to provide at least one map with capabilities that allow a user to continuously zoom in and out of selected areas of the map; and

means for applying a displayable map overlay to the requested image data.

**19**. The system of claim 18 wherein the displayable map overlay includes one or more types of location-based data configured for dynamic display in association with the map, wherein the one or more types of data include any one or more of city names information, commercial points of interest information, noncommercial points of interest information, neighborhood information, almanac information, state boundary information, county boundary information, waterway information, roads information, tax information, historical information, parks information, schools information, county parcel map information, real estate information associated with current listings, real estate information associated with previously sold listings, topography information, dwelling age information, real estate open house information, garage sale information, census bureau information, crime statistics, and traffic analysis information.

**20**. The system of claim 18 wherein the provided display description and associated displayable map overlay are presentable within a web browser at a client computer.

**21**. A computer-readable medium containing a data structure for performing a method in a computer system for providing maps and associated information, the method comprising:

receiving a request for map image data associated with satellite images, aerial photographs, or rasterized maps,

or any combination of satellite images, aerial photographs, and rasterized maps;

receiving a request for map overlay data, wherein the map overlay data is configurable for display in association with one or more interactive maps generated using the map image data;

providing a display description associated with the requested map image data as a collection of map tiles, wherein the collection of map tiles is configurable to provide an interactive map with capabilities that allow a user to zoom in on and out of selected areas of the map; and

providing information associated with displaying the requested map overlay data in association with the requested map image data.

**22**. A method in a computer system for providing maps and associated information, comprising:

receiving a request for map image data associated with satellite images, aerial photographs, or rasterized maps, or any combination of satellite images, aerial photographs, and rasterized maps;

receiving a request for map overlay data, wherein the map overlay data is configurable for display in association with one or more maps generated using the map image data;

providing at least one display description associated with the requested map image data and the requested map overlay data; and

providing information associated with displaying a window or view adjacent to or in addition to the one or more maps generated using the map image data, wherein the window or view contains information related to the one or more maps or information related to the overlay data, or information associated with the one or more maps and the overlay data.

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